July 2009

Section 9
Environmental Protection Act
R.S.O. 1990

Sample Application Package

Extension of the Limited Operational Flexibility of a
Basic Comprehensive Certificate of Approval (Air & Noise)
for a facility to Which s.18 of O. Reg. 419/05 Applies

(Using the Appendix to Regulation 346 Air Dispersion Model)

PIBS 6833e

Protecting our environment. Ontario

FOREWORD

This document has been produced by the Environmental Assessment and Approvals Branch as an example of a complete application submission to extend the limited operational flexibility on a Basic Comprehensive Certificate of Approval for a facility to which s.20 of *Ontario Regulation 419/05, Air Pollution – Local Air Quality* applies. While every effort has been made to ensure the accuracy of the information contained in this document, it should not be construed as legal advice.

The following forms have been used in this sample application package:

- Application for Approval (Air & Noise)
- Supporting Information Worksheet – Supplement to Application for Approval, EPA s.9
- Costs for EPA s.9 Applications, Supplement to Application for Approval
- Noise Screening Process for s.9 Applications - Supplement to Application for Approval
- Emission Summary and Dispersion Modeling Checklist

Instructions for completing these forms and additional information about Air & Noise Certificate of Approval is available in the following publications:

- Green Facts: Certificates of Approval – Air and Noise
- Guide to Applying for Approval – Air and Noise
- Guide – Application Costs for Air Emissions, EPA s. 9
- Procedure for Preparing an Emission Summary and Dispersion Modeling Report

For additional information about Ontario's air regulations and standards please visit http://www.ene.gov.on.ca/en/air/ministry/index.php#reg. For more information Certificates of Approval or to obtain an application package, please visit the Ministry of the Environment Internet site at http://www.ene.gov.on.ca or contact:

Ministry of the Environment
Environmental Assessment and Approvals Branch
2 St. Clair Ave. W, Floor 12A
Toronto, ON M4V 1L5

Toll Free: 1-800-461-6290
Phone: 416-314-8001
Fax: 416-314-8452
Email: EAABGen@ene.gov.on.ca

Virginia Trust-Worthy
General Manager
Acme Inc.
123 Anywhere Street
Anytown, Ontario
A1B 2C3

September 19, 2008

Section 9 Director
Ontario Ministry of the Environment
Environment Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, ON
M4V 1L5

Re: Application to Renew Basic Comprehensive Certificate of Approval (Air & Noise), Acme Anytown Plant

Dear Sir or Madam:

Please find attached two copies of an application package to extend the Limited Operational Flexibility on Basic Comprehensive Certificate of Approval (Air & Noise) Number 1234-ABCDEF for the Acme Inc. Anytown facility including the required fee and complete with the following documentation:

- Application Summary
- Completed Application Form
- Attachment 1 – Supporting Information Checklist
- Attachment 2 – Costs for EPA s.9 Applications, Supplement to Application for Approval
- Attachment 3 – Emission Summary and Dispersion Modelling Report
- Attachment 4 – Noise Screening Process for s.9 Applications

Sincerely,

Virginia Trust-Worthy

Virginia Trust-Worthy
General Manager

Enc.

Cc: Othertown District Office

VTW/sa

SUMMARY

P.E.S. Stacks Inc. (P.E.S. Stacks) was retained by ACME Inc. (ACME) to prepare an application to extend the limited operational flexibility of the Basic Comprehensive Certificate of Approval (Air & Noise) (CofA [Air & Noise]), under Section 9 of the Ontario *Environmental Protection Act* (EPA) for the facility located at 123 Anywhere Street in Anytown, Ontario (the Facility).

The purpose of this CofA (Air & Noise) application is to renew current Basic Comprehensive CofA (Air & Noise) No. 1234-ABCDEF, which has a maximum Facility production limit of 1,200,000 coated parts produced per year.

ACME produces coated metal products for use in the aviation industry. The main manufacturing process consists of coating metal components with a solvent based coating. The metal parts are fabricated offsite; the operations at the Facility are limited to the coating process. The Facility operates from 8:30 am to 5:30 pm, seven days a week, up to 50 weeks per year.

This application and supporting documentation were prepared in accordance with all applicable regulatory and Ministry requirements that were in effect at the time of application.

The Facility was constructed prior to November 30, 2005 and no speed-up notices under s.20(4) or s.20(5) have been requested or issued to the Facility. The NAICS code that applies to this Facility is 336410 which is listed in Schedule 5 of O.Reg.419/05. As such, s.18 of O.Reg.419/05 currently applies, and s.20 of O.Reg.419/05 will apply on February 1st, 2013. Therefore, assessment of compliance was performed using the Appendix to Regulation 346 models and the standards listed in Schedule 1 of O.Reg.419/05, as well as the applicable Ministry limits listed in *"Summary of O.Reg. 419 Standards, Point of Impingement Guidelines and Ambient Air Quality Criteria (AAQC)"*, dated February 2008 (List of MOE POI Limits).

An Emission Summary and Dispersion Modelling (ESDM) Report was prepared to support the application to extend the operational flexibility of the Basic Comprehensive CofA (Air & Noise) and was prepared in accordance with s.26 of Ontario Regulation 419/05 (O. Reg. 419/05). In addition, guidance in the Ontario Ministry of the Environment (MOE) publication, *"Procedure for Preparing an Emission Summary and Dispersion Modelling Report"*, dated July 2005 (ESDM Procedure Document) was followed, as applicable.

Dispersion modelling was performed using the procedures outlined in the Appendix to Ontario Regulation 346/90 and the MOE publication, "*Air Dispersion Modelling Guideline for Ontario, Version 1.0*", dated July 2005 (ADMGO).

Contaminants released by the Facility that are not found on the List of MOE POI Limits are considered to be 'Contaminants with No Ministry POI Limits'. There are three 'Contaminants with No Ministry POI Limits' at the Facility. The POI concentrations of 2-methylbutyl alcohol and n-propoxypropanol remain unchanged from the approved concentrations covered in the CofA Application No. 1234-ABCDEF, dated Oct. 1, 2004. The POI concentration of amyl alcohol is still equal to the approved concentration assessed in the Maximum Concentration Level Assessment submitted by ACME Inc. April 2007. Furthermore, Jurisdictional Screening Limits (JSLs) now exist on the "*Jurisdictional Screening Level (JSL) List A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality*" (dated February 2008) for these three (3) contaminants, of which, each concentration is below the limit.

All of the predicted POI concentrations for contaminants listed in the Emission Summary Table that are included in the List of MOE POI Limits are below the corresponding limits. The highest maximum POI concentration is 85% of the limit for xylene.

The MOE form, "*Noise Screening Process for s.9 Applications, Supplement to Application for Approval*", was completed. It was determined that the Facility is capable of meeting the minimum required separation distance of 300 metres, as there are no noise sensitive receptors within a 300 metre radius.

In summary, this CofA (Air & Noise) application demonstrates that the Facility complies with all applicable regulatory and Ministry requirements under Section 9 of the EPA. P.E.S. Stacks recommends that a renewed Basic Comprehensive CofA (Air & Noise) be issued for the Facility.

Ontario
Ministry of the Environment

Application for Approval (Air & Noise)

Ce formulaire est disponible en français

For Office Use Only			
Reference Number	Payment Received $	Date *(y/m/d)*	Initials

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Environmental Protection Act,* R.S.O. 1990 (EPA) and the *Environmental Bill of Rights*, C. 28, Statutes of Ontario, 1993, (EBR) and will be used to evaluate applications for approval under Section 9 of the EPA. This form must be completed with respect to all requirements identified in the Guidance Material listed below in order for it to be considered an application for approval. **INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT.** Even if the application is accepted as complete**, t**he Ministry of the Environment may require additional information during the technical review of the application.

Instructions:

1. **Applicants are responsible for ensuring that they complete the most recent application form.** When completing this form, please refer to the following Guidance Material: the "Guide to Applying for Approval (Air & Noise), Section 9, EPA" and the "Guide - Application Costs for Air Emissions, S. 9, EPA". Application forms and supporting documentation are available from the Environmental Assessment and Approvals Branch toll free at 1-800-461-6290 (locally at 416-314-8001), from your local District Office of the Ministry of the Environment, and in the "Publications" section of the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/gp/index.htm#PartAir.

2. Questions regarding completion and submission of this application should be directed to the Environmental Assessment and Approvals Branch of the Ministry of the Environment at the address below or to the local District Office which has jurisdiction over the area where the facility is located. A list of these District Offices is available on the Ministry of the Environment Internet site at http://www.ene.gov.on.ca/envision/org/op.htm#Reg/Dist.

3. A complete application package consists of a completed, signed application form and all required supporting information required by O. Reg. 419/05, identified in this form and the Guidance Material.

4. Three application packages must be submitted to the Ministry of the Environment. Two application packages, the original and a copy must be sent to:

   Ministry of the Environment,
   Director, Environmental Assessment and Approvals Branch,
   2 St. Clair Avenue West, Floor 12A
   Toronto, Ontario, M4V 1L5
   Phone: 416-314-8001
   Toll Free: 1-800-461-6290
   Email: EAABGen@ene.gov.on.ca

   These application packages should include a cheque, money order or credit card payment, in Canadian funds, made payable to the *Ontario Minister of Finance* for the applicable application fee. A third copy of the application package must be sent to the local District Office which has jurisdiction over the area where the facility is located.

5. Information contained in this application form is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA) and the *EBR*. If you do not claim confidentiality at the time of submitting the information, the Ministry of the Environment may make the information available to the public without further notice to you. For more information, please refer to Section 4.9 of the "Guide to Applying for Approval (Air & Noise), Section 9, EPA".

6. If the Applicant submits with the application a copy of their Master Business License (MBL) obtained from the Ministry of Government Services, the **shaded sections within this form do not need to be completed (provided the information required appears on the face of the MBL)**. For additional information on the MBL please refer to Section 4.1 of the "Guide to Applying for Approval (Air & Noise), Section 9, EPA".

1. Applicant Information *(Owner of works/facility)*

Applicant Name *(legal name of individual or organization as evidenced by legal documents)*	Business Identification Number
Acme Inc.	123456789

Business Name *(the name under which the entity is operating or trading if different from the Applicant Name - also referred to as trade name)*

Applicant Type:

☒	Corporation	☐	Federal Government
☐	Individual	☐	Municipal Government
☐	Partnership	☐	Provincial Government
☐	Sole Proprietor	☐	Other *(describe):*

North American Industry Classification System (NAICS) Code: 336410 Aerospace Product and Parts Manufacuring

Business Activity Description *(a description of the business endeavour, this may include products sold, services provided or machinery/equipment used, etc.)*

Acme Inc. produces coated metal products for use in the aviation industry. The main process consists of coating metal components with a solvent based coating. The metal parts are fabricated elsewhere; the operations at the facility are limited to the coating process.

2. Applicant Physical Address

Civic Address- Street information *(address that has civic numbering and street information includes street number, name, type and direction)*	Unit Identifier *(i.e. suite or apartment number)*
123 Anywhere Street	

Survey Address *(used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory. Not required if Street Information is provided)*

Lot and Conc.: used to indicate location within a subdivided township and consists of a lot number and a concession number		Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan	
Lot	Conc.	Part	Reference Plan

Municipality/Unorganized Township	County/District	Province/State	Country	Postal Code
Anytown	Prosperous County	Ontario	Canada	A1B 2C3

3. Site Information - *(location where activity/works applied for is to take place)*

Is this an application for a mobile facility?	Site Name	MOE District Office
☐ Yes ☒ No	Acme Anywhere Plant	Othertown District Office

Address Information:

Same as Applicant Physical Address? ☒ Yes ☐ No (If no, please provide site address information below)

Site Address - Street information *(address that has civic numbering and street information includes street number, name, type and direction)*	Unit Identifier *(i.e. suite or apartment number)*

Survey Address *(used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)*

Lot and Conc.: used to indicate location within a subdivided township and consists of a lot number and a concession number		Part and Reference: used to indicate location within an unsubdivided township or unsurveyed territory, and consists of a part and a reference plan number indicating the location within that plan. Attach copy of the plan	
Lot	Conc.	Part	Reference Plan

Non Address Information *(includes any additional information to clarify applicants' physical location)*

Municipality/Unorganized Township	County/District	Postal Code

Geo Reference

Map Datum	Zone	Accuracy Estimate	Geo Referencing Method	UTM Easting	UTM Northing

Is the Site located in an area of development control as defined by the Niagara Escarpment Planning & Development Act (NEPDA)?

☐ Yes ***If yes, please attach a copy of the NEPDA permit for proposed activity/work***

☒ No

Is the Site located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (ORMCP), a regulation made under the Oak Ridges Moraine Conservation Act (ORMCA)?

☐ Yes ***if yes, please attach proof of Municipal planning approval for the proposed activity/work***

☒ No

Is the Applicant the operating authority?

☒ Yes

☐ No ***If no, please attach the operating authority name, address and phone number***

Is the Applicant the owner of the land (site)?

☒ Yes

☐ No ***If no, please attach the owner's name, address and a signed letter granting consent for the installation and operation of the facilities***

Has this facility and one or more adjacent facilities been deemed to be one property under s.4 of O. Reg. 419/05?

☐ Yes ***If yes, please attach supporting information***

☒ No ***Note: all sources from the adjacent facility must be included in the Emission Summary and Dispersion Modelling Report.***

4. Project Technical Information Contact

Name	Company
Joe Consultant	P.E.S. Stack Inc.

Address Information:

Same as Applicant Physical Address? ☐ Yes ☒ No (If no, please provide technical information contact address information below)

Civic Address - Street information *(address that has civic numbering and street information includes street number, name, type and direction)*	Unit Identifier *(i.e. suite or apartment number)*
234 Other Street	Suite 1

Delivery Designator:
If signing authority mailing address is a Rural Route, Suburban Service, Mobile Route or General Delivery *(i.e., RR#3)*

Municipality	Postal Station	Province/State	Country	Postal Code
Anytown		Ontario	Canada	A1B 2C3

Telephone Number *(including area code & extension)*	Fax Number *(including area code)*	E-mail Address
(905) 555 - 2345	(905) 555-2399	JoeConsultant@PES.com

5. Project Information

Type of Application:

- ☐ New Certificate of Approval for this Facility
  - Did construction of the facility begin after November 30, 2005? ☐ Yes ☐ No
  - Does the NAICS Code for the facility fall into Schedule 4 or 5 of O. Reg. 419/05? ☐ Yes ☐ No
- ☒ Amendment to current Certificate of Approval
- ☐ Basic Comprehensive Certificate of Approval
- ☐ Consolidated Certificate of Approval

Current Certificate of Approval Number	Current Certificate of Approval Date of Issue (yyyy/mm/dd)
1234-ABCDEF	2004/10/01

Application Initiated by:

☒ Proponent ☐ Environmental Assessment and Approvals Branch ☐ Provincial Officer Order (attach copy) ☐ Other (specify): _____

List all other environmental approvals/permits applied or received in relation to this **project** under the *Environmental Protection Act*, the *Ontario Water Resources Act*, the *Safe Drinking Water Act*, *Environmental Assessment Act* or any other related legislation. (*Please attach a separate list if more space is required*).

Project Description Summary *(If EBR is applicable, this summary will be used in the EBR posting notice)*

This proposal is to extend limited operational flexibility for Basic Comprehensive Certificate of Approval (Air and Noise) number 1234-ABCDEF for the Acme Anytown facility which currently has a facility production limit of 1,200,000 coated parts per year. There is no change to the approved emissions from the Facility.

Project Name *(Project identifier to be used as a reference in correspondence)*

Acme Anytown Plant

Project Schedule

Estimated date for start of construction/installation (yyyy/mm/dd)	Estimated date for start of operation (yyyy/mm/dd)
1999/10/31	2000/04/01

6. O. Reg. 419/05 Requirements

Which of the following sections of O. Reg. 419/05 applies to the facility?

☒ s.18 (Schedule 1) ☐ s.19 (Schedule 2) ☐ s.20 (Schedule 3)

If s.20 of O. Reg. 419/05 applies to the facility, do all new sources of contaminant meet the Good Engineering Practice (GEP) stack height requirements of s.15?

☐ Yes ☐ No

Has the facility been issued a notice or an order under s 7(1), 8(2), 10(2), 11(2), 13(2), 14(4), 17(3), 20(4) or 20(5)?

☐ Yes **If yes, please attach a copy of the notice, amended notice, revoked notice, order and/or additional supporting information**

☒ No

Has a request for approval for an alteration of a Schedule 3 standard under s. 32 of O. Reg. 419/05 been made for this facility?

☐ Yes **If yes, please attach a copy of ministry acknowledgement letter (if available) or an overview of the request**

☒ No

Do you exceed any s.30 Upper Risk Thresholds (Schedule 6)?

☐ Yes ☒ No **If yes, please attach additional supporting information**

7. Other Air Approvals for Facility – *Please attach a separate list if more space is required*

Separate list attached? ☐ Yes ☒ No

List all other environmental approvals issued to this facility under the Section 9 of the *Environmental Protection Act*.

8. *Environmental Assessment Act (EAA)* Requirements

Are the works for which this proposal is made subject to (or exempted from) the requirements of the EAA? ☐ Yes ☒ No

If "Yes," please check one of the following

☐ The works for which this application is made are exempt from the requirements of the EAA under:

☐ Section _____ of Ontario Regulation No. _____ **or**

☐ Declaration/Exemption Order Number _____

If Regulation, Declaration Order or Exemption Order does not refer directly to this facility, state in a covering letter or other document why it does apply to the facility – ***Please provide supporting information***

☐ The works for which this application is made have fulfilled all of the requirements of the EAA through the completion of the Municipal Class EA process in accordance with the procedures set out in:

☐ Schedule A ☐ Schedule B ☐ Schedule C

If Schedule A, was the project planned in accordance with section A.2.9 – Integration with the *Planning Act* of the Class EA?

☐ Yes ☐ No

If Yes, please submit a copy of the summary required by section A.2.9.3 of the Class EA and a copy of the Planning Act notice.

If Schedule B or C of the Municipal Class EA, please submit a copy of the Notice of Completion.

Were Part II Order requests received? ☐ Yes ☐ No

If Yes, please submit a copy of the Minister's decision letter.

☐ The works for which this application is made have fulfilled all of the requirements of the EAA through the completion of the requirements of another class EA process:

Name of Class EA: _____

Schedule/Group/Category (if applicable): _____

If applicable, please submit a copy of the Notice of Completion.

Were Part II Order requests received? ☐ Yes ☐ No

If Yes, please submit a copy of the Minister's decision letter.

☐ The works for which this application is made have fulfilled all of the requirements for the Environmental Screening Process pursuant to O. Reg. 116/01 of the EAA through:

☐ Completion of an Environmental Screening.

☐ Completion of an Environmental Review

Please submit the Statement of Completion, and indicate if any Elevation Request(s) were received.
If Elevation Request(s) were received, please submit a copy of the Director's decision letter.
If the Director's decision was appealed to the Minister, please submit a copy of the Minister's decision letter.

☐ The works for which this application is made have fulfilled all of the requirements of the EAA through the preparation of an environmental assessment.

Please submit a copy of the signed Notice of Approval.

Was this undertaking designated subject to the EAA by regulation? ☐ Yes ☐ No

If yes, please indicate the regulation: _____

9. Environmental Bill of Rights Requirements (EBR) Requirements

Is this a proposal for a prescribed instrument under EBR? ☒ Yes ☐ No

If "Yes", is this proposal exempted from EBR requirements? ☐ Yes ☒ No

If "Yes," please check one of the following

☐ This proposal has been considered in a substantially equivalent process or by a decision of a tribunal. **Please provide supporting information**

☐ This proposal is for an amendment to or revocation of an existing Certificate of Approval that is not environmentally significant. **Please provide supporting information**

☐ This proposal is for an emergency situation. **Please provide supporting information**

☐ This proposal has been subject to or exempted from EAA Requirements. **Please provide supporting information**

10. Additional Public Consultation/Notification

Separate list attached? ☐ Yes ☒ No

Specify all public consultation/notification *(such as public hearings, notification of First Nations, request for an Alternative Standard under s.32 of O. Reg. 419/05, etc.)* related to the project that have been completed or are in the process of being completed. Please attach a separate list describing each of these consultation activities, the results achieved, and planned future consultation activities.

11. List of Attachments - *This is a list of all supporting information to this application and is subject to the Freedom of Information and Privacy Protection Act and the Environmental Bill of Rights.*

Attachment	Attached	Reference	Can be disclosed
Information Required by Application Form			
Supporting Information Worksheet - Supplement to Application for Approval, EPA S.9 (PIBS 4873)	☒ Yes	Attachment 1, Supporting Info.	☒ Yes ☐ No
Costs for EPA S.9 Applications - Supplement to Application for Approval (PIBS 4108)	☒ Yes	Attachment 2, Cost Sheet	☒ Yes ☐ No
Application Fee (cheque or money order attached or credit card information provided)	☒ Yes	Attached	☒ Yes ☐ No
Information Supporting Compliance with O. Reg. 419/05			
Emission Summary and Dispersion Modelling (ESDM) Report prepared in accordance with s.22 of O. Reg. 419/05 (including signed checklist – PIBS 5357e)	☒ Yes ☐ No	If no, indicate why: ☐ Minor Amendment (no technical review) ☐ Equipment Subject to Streamlined Review ☐ Subsurface Approval	☒ Yes ☐ No
Supporting Information for a Maximum Ground Level Concentration Acceptability Request for Compounds with no Ministry POI Limit - Supplement to Application for Approval, EPA S.9 (PIBS 4872)	☐ Yes ☒ No		☐ Yes ☐ No
Information Supporting Compliance with Noise and Vibration Guidelines			
Noise Screening Process for S.9 Applications -Supplement to Application for Approval (PIBS 4871)	☒ Yes ☐ No	Attachment 4, Noise	☒ Yes ☐ No
Does the Equipment/Facility meet minimum separation distance?	☒ Yes ☐ No	Attachment 4, Noise	☒ Yes ☐ No
If the Equipment/Facility does not meet minimum separation distance, then attach:			
1. Acoustic Assessment Report including signed checklist (PIBS 5356e)	☐ Yes ☐ No		☐ Yes ☐ No
2. Vibration Assessment Report	☐ Yes ☐ No		☐ Yes ☐ No
Other Information Supporting Compliance With Applicable Regulations and Guidelines or to Describe the Project (include separate list if required)			
	☐ Yes ☐ No		☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No

12. Payment Information

Amount Enclosed: $ 1800 *Please attach completed "Costs for EPA s.9 Applications – Supplement to Application for Approval" (PIBS 4108).*

Method of Payment

☐ Cheque ☐ Money Order ☒ VISA ☐ MasterCard ☐ American Express

Credit Card Information *(if paying by VISA, MasterCard or American Express)**

Name on Card *(please print)*	Credit Card Number	Expiry Date (m/y)
Virginia Trust-Worthy	4567 6541 2345 4321	12/09

Cardholder Signature	Date *(y/m/d)*
Virginia Trust-Worthy	2008/11/19

**NOTE: credit card accepted for payments UNDER $10,000.00 only.*

13. Statement of Applicant

I, the undersigned hereby declare that, to the best of my knowledge:

- The information contained herein and the information submitted in support of this application is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184(2) of the *Environmental Protection Act*..
- The Project Technical Information Contact identified in section 5 of this form is authorized to act on my behalf for the purpose of obtaining approval under Section 9 of the EPA for the equipment/processes identified herein.
- I have used the most recent application form (as obtained from the Ministry of the Environment Internet site at http://www.ene.gov.on.ca/envision/gp/index.htm#PartAir or the Environmental Assessment and Approvals Branch at 1-800-461-6290) and I have included all necessary information required by O. Reg. 419/05, identified on this form and in the Guidance Material.

Name of Signing Authority *(please print)*	Title
Virginia Trust-Worthy	General Manager

Telephone Number *(including area code & extension)*	Fax Number *(including area code)*	E-mail Address
(905) 555 - 1985	(905) 555 - 1967	VTrust@acmeinc.com

Signature	Date *(y/m/d)*
Virginia Trust-Worthy	2008/11/19

Address Information:

Same as Applicant Physical Address? ☒ Yes ☐ No (If no, please provide signing authority mailing address information below)

Civic Address - Street information *(address that has civic numbering and street information includes street number, name, type and direction)* | Unit Identifier *(i.e. suite or apartment number)*

Delivery Designator:
If signing authority mailing address is a Rural Route, Suburban Service, Mobile Route or General Delivery *(i.e., RR#3)*

Municipality	Postal Station	Province/State	Country	Postal Code

ATTACHMENT 1

SUPPORTING INFORMATION WORKSHEET, SUPPLEMENT TO APPLICATION FOR APPROVAL, EPA S.9 AND SUPPORTING INFORMATION INCLUDING:

MASTER BUSINESS LICENCE
COPY OF CURRENT CERTIFICATE OF APPROVAL

Ministry of the Environment | Ministère de l'Environnement

Ontario

SUPPORTING INFORMATION WORKSHEET
SUPPLEMENT TO APPLICATION FOR APPROVAL, EPA S.9

This document lists the attachments to the Section 9 Application Form that may be required from an applicant. This worksheet is intended to assist applicants in completing the Application Form and should be read in conjunction with the Guide to Applying for Approval (Air and Noise) dated February, 2005.

This worksheet must be attached to a Section 9 Application Form to be considered complete

	Attachment	Guide to Applying Reference	Required if…	Included	Reference	Confidential
1.	Proof of Legal Name of Applicant	Section 4.1	Always Required unless Master Business Licence is submitted	☐ Yes ☒ N/A		Not Applicable
2.	Copy of Master Business Licence	Section 4.2	Applicant is an Ontario Company and wishes to simplify the application process	☒ Yes ☐ N/A	Attach. 1	Not Applicable
3.	Legal Survey	Section 4.3	If survey address is provided	☐ Yes ☒ N/A		
4.	Copy of NEDPA Permit	Section 4.3	Facility is within an area of development control as defined by the Niagara Escarpment Planning and Development Act	☐ Yes ☒ N/A		☐ Yes ☐ No
5.	Copy of Municipal Planning Approval (ORMCA)	Section 4.3	Facility is within the Oak Ridges Moraine Conservation Area	☐ Yes ☒ N/A		☐ Yes ☐ No
6.	Name, Address and Phone Number of the Operating Authority	Section 4.3	Equipment will be operated not by the applicant but by an Operating Authority	☐ Yes ☒ N/A		☐ Yes ☐ No
7.	Name, Address and consent of the land/site owner for the installation/construction and operation of the equipment/facility	Section 4.3	Applicant is not the owner of the site where the facility is located	☐ Yes ☒ N/A		☐ Yes ☐ No

	Attachment	Guide to Applying Reference	Required if…	Included	Reference	Confidential
8.	Copy of current Certificate of Approval	Section 4.5	Application is for an amendment to a current CofA	☒ Yes ☐ N/A	Attached	Not Applicable
9.	List of all environmental approvals/permits applied for relating to this project or received in relation to this project.	Section 4.5	Other environmental approvals/permits have been applied for or issued under the EPA or OWRA in relation to this project only	☐ Yes ☒ N/A		Not Applicable
10.	Copy of Provincial Officer's Order requiring submission of application	Section 4.5	Application is a result of a Provincial Officer's Order	☐ Yes ☒ N/A		Not Applicable
11.	List of all approvals issued to this facility under Section 9 of the *Environmental Protection Act*	Section 4.6	Previous Section 9 approvals have been issued to the facility	☐ Yes ☒ N/A		Not Applicable
12.	Supporting information that proposal is not a Prescribed instrument under the EBR	Section 4.6	Application meets the requirements of O. Reg 681/94	☐ Yes ☒ N/A		☐ Yes ☐ No
13.	Supporting information relating to exemption from the public participation requirements of the *Environmental Bill of Rights.*	Section 4.7	Applicant is requesting that the proposal is exempt from posting on the Environmental Registry	☐ Yes ☒ N/A		☐ Yes ☐ No
14.	Supporting information relating to exemption from or fulfilment of requirements under the *Environmental Assessment Act.*	Section 4.7	Application is part of an undertaking subject to the EAA	☐ Yes ☒ N/A		☐ Yes ☐ No
15.	List describing public consultation activities related to this project	Section 4.7,8	Applicant is involved in any public consultation / notification activities in addition to EBR / EAA	☐ Yes ☒ N/A		☐ Yes ☐ No
16.	Application Fee	Section 4.10	Always Required	☒ Yes ☐ N/A	Attached	Not Applicable
17.	Financial Assurance	Section 2	If The Section 9 Director determines that Financial Assurance is necessary based on the nature of the Application (Waste Disposal Site or Remediation for example)	☐ Yes ☒ N/A		☐ Yes ☐ No
18.	Applicant Fee Worksheet	Section 4.9	Always Required	☒ Yes ☐ N/A	Attach. 2	Not Applicable

Please note: the release of information contained in application forms and documentation submitted in support of applications for approval is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This Act defines what may and may not be disclosed to the public, and is used to assess all requests for information contained in the documents on file with an application for approval.

The information submitted with an application for approval may also be subject to the *Environmental Bill of Rights*. In those situations, the application and the associated non-confidential supporting documentation is made available for review by members of the public.

The applicants should therefore identify all documents as noted above which are to be considered confidential and must provide detailed evidence in support of this claim. This evidence will be one of the factors the ministry would consider when making a decision regarding disclosure of specific documents on file.

Ontario

Sample of a Master Business Licence

Date Issued: ⧖✢✯✤ ✈
(yyyy-mm-dd)

Business Name and Mailing Address:

⧖✢✯✤ ✈✯✢!!
⌐⌙◘ ⧖✯✸✶✧✤✱✤ ⊷✳✱✤✤✳
⧖✯✸✳✯✶✯▃ ✎✯✳✠✱✯
✍□✍ ⌐⧖⌐

Business
Address: SAME AS ABOVE

Telephone: ⧖✢✯✤ ✈✯✢!! Ext: Fax: ⧖✢✯✤ ✈✯✢!!

E-Mail: ⧖✢✯✤ ✈✯✢!!

Legal
Name(s): ⧖✢✯✤ ✈✯✢!!

Type of
Legal Entity: ⧖✢✯✤ ✈✯✢!!

Business Information	Number	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)
Acme Inc	123456789	⧖✢✯✤ ✈	⧖✢✯✤ ✈

To the Client: When the Master Business Licence is prestnted to any Ontario business program, you are not required to repeat information contained on this licence. Each Ontario business program is required to accept this licence when presented as part of its registration process.
Call the Ontario Business Connects Helpline at 1-800-565-1921 or (416) 314-9151 or TDD (416) 326-8566 if you have any problems.

To the Ontario business program: A client is not required to repeat any information contained in this licecen in any other form used in your registration process.

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Ministry of the Environment | Ministère de l'Environnement

CERTIFICATE OF APPROVAL
AIR
NUMBER 1234-ABCDEF
Issue Date: October 1, 2004

Ontario

ACME Inc.
123 Anywhere Street,
Anytown, ON
A1B 2C3

Site Location: ACME AnyTown Plant
123 Anywhere Street, Municipality of Anytown, Prosperity County

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

Description Section

A metal parts coating facility, consisting of the following processes and support units:

- solvent dip-tank coating processes;

including the *Equipment* and any other ancillary and support processes and activities, **operating at a *Facility Production Limit* of up to 1,200,000 coated parts produced per year,** exhausting to the atmosphere as described in the *ESDM Report.*

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. *"Air Standards Manager"* means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those duties relate to the conditions of this *Certificate.*

2. *"Basic Comprehensive User Guide"* means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated April 2004, as amended.

3. *"Certificate"* means this entire certificate of approval document, issued in accordance with section 9 of the *EPA* and includes all the *Schedules,* and the *Supporting Documentation.*

4. *"Company"* means ACME Inc. operating as ACME AnyTown Plant that is responsible or the construction or operation of the *Facility* and includes any successors and assigns.

ATTACHMENT 2

COSTS FOR EPA S.P APPLICATIONS, SUPPLEMENT TO APPLICATION FOR APPROVAL

Ministry of the Environment | Ministère de l'Environnement

Ontario

COSTS FOR EPA s.9 APPLICATIONS
SUPPLEMENT TO APPLICATION FOR APPROVAL

Information requested in this form is collected under the authority of the Environmental Protection Act, R.S.O. 1990 (EPA) and the Environmental Bill of Rights, c. 28, Statutes of Ontario, 1993, (EBR) and will be used to evaluate applications for approval under Section 9 of the EPA. This form is a supplement to the Application for Approval (Air & Noise) and should be submitted with all applications for approval under Section 9 of the ***EPA.***

O.Reg. 363/98 "Fees – Certificates of Approval" requires applicants for a certificate of approval under Section 9 of the EPA to pay a fee at the time of submitting the application. This fee must be calculated in accordance with the Fees Regulation. ***Applications that do not include the correct fee amount will not be processed by the EAAB.*** *This form is intended to assist applicants in calculating the correct fee amount in accordance with the Fees Regulation. For instructions/assistance completing this form, please refer to the publication titled: "Guide: Application Costs for Air Emissions, s.9 Environmental Protection Act". This form and associated publications are available on the Ministry of the Environment web site at http://www.ene.gov.on.ca/envision/gp/index.htm#PartAir or by contacting the Environmental Assessment and Approvals Branch at 1-800-461-6290 or (416) 314-8001.*

Company Name	Site Name	
Acme Inc.	Acme Anytown Plant	
Site Address - Street information *(includes street number, name, type and direction)*		Unit Identifier *(unit, suite, apt, etc)*
123 Anywhere Street		
Survey Address *(used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)*		
Non Address Information *(includes any additional information to clarify clients' physical location)*		
Municipality/Unorganized Township	County/District	Postal Code
Anytown	Prosperous County	A1B 2C3

Application Type: ***Indicate the applicable aspect(s) of the application and complete the corresponding section(s) of this form.***

☒ Application that requires technical review (Section 1)
Applications for a Greenfield facility, an existing facility that does not have any approvals, amendment to an existing CofA to add new equipment or to consolidate existing equipment into one CofA or for a Basic Comprehensive Certificate of Approval

☐ Revocation of an existing approval that requires technical review (Section 2)
This application is to revoke an existing approval or condition on a certificate of approval that requires a technical review such as a groundwater remediation system, air pollution control equipment (cyclone, dust collector); noise control measures (silencer, barrier)

☐ Administrative amendment of an existing approval (Section 3)
This application is for a minor amendment to an existing approval such as a minor technical correction, etc, that does not require a technical review

☐ Fee exempted amendment or revocation of an existing approval that does not require technical review (Section 4)
This application is required by a condition on a Certificate of Approval, or to revoke a CofA for equipment/facility that is no longer in operation and does not require technical review

Note: If you are seeking a Preliminary Review as defined by the Fee Regulation please contact the EAAB to discuss prior to proceeding with the application.

SECTION 1: Application that Requires Technical Review
Complete tables 1, 2 & 3 and enter your information in the summary table below.

(√)		Description	Cost
☒	A	Administrative processing (always required for all applications)	$ 200
☐	B	Fixed Cost Review for Equipment (Table 1)	$
☒	C	Emission Summary and Dispersion Modelling Report Review (Table 2)	$ 1600
☐	D	Noise Assessment Review (Table 3)	$
		TOTAL COST:	$ 1800

TABLE 1: *Fixed Cost Review for Equipment*

This table is to be used for new applications or for amendments or revocation to an existing approval. Applicants must identify all equipment that is the subject of the application and include the equipment in the appropriate category on the table. Sections used should be indicated in the left hand column. Equipment that has been previously approved does not have to be included on the table provided that the existing approved equipment is not being modified by the application.

Table 1.1 Equipment subject to Site-wide Fees

(√)		Description	Equipment Specification	Cost	Applicable Fee
☐	1.1.1	Combustion Equipment that uses natural gas, propane, no. 2 oil, landfill gas or sewage treatment gas for fuel for the purpose of providing comfort heating or emergency power, producing hot water or steam, or heating material in a system that does not discharge to the atmosphere	Total Heat input of all units ≤ 50,000,000 kJ/hr	$ 400	$
☐	1.1.2	Storage tanks	N/A	$ 400	$
☐	1.1.3	Welding operations that use a maximum of 10 kilograms of welding rod per hour	N/A	$ 400	$
☐	1.1.4	The application is for an amendment to an existing approval which will not result in an increase in the discharge of any contaminant that was reviewed by the Director for the purpose of issuing the existing certificate	N/A	$400	$

Applicable Fee is based on the type of equipment, if the equipment does not meet the description or specification then use table 1.3

Table 1.2 Equipment Subject to Individual Fees

(√)		Description	Quantity of Equipment		Cost	Applicable Fee
			Formula to Calculate A	A		
☐	1.2.1	Combustion Equipment that uses waste derived fuel for the purpose of providing comfort heating, burning ≤ 15 litres per hour	# of pieces of combustion equipment		x $400 =	$
☐	1.2.2	Heat cleaning ovens used for parts cleaning, and associated parts washers or degreasing equipment, other than solvent degreasing equipment	# of heat cleaning ovens		x $400 =	$
☐	1.2.3	Cooling towers	# of cooling towers divided by two, rounded up to the next whole number		x $400 =	$
☐	1.2.4	Equipment used to control emissions of contaminants, other than a fume incinerator.	# of pieces of pollution control equipment		x $400 =	$
☐	1.2.5	Laboratory fume hoods	# of laboratory fume hoods divided by 5, rounded up to the next whole number		x $400 =	$
☐	1.2.6	Paint spray booths and associated equipment that have a design capacity of up to 8 litres per hour of paint	# of paint spray booths		x $400 =	$
☐	1.2.7	Grain dryers	# of grain dryers		x $400 =	$

Applicable Fee is calculated based on the quantity of equipment, calculated using the formula specific for the equipment. Note the formula provides whole numbers only.

Table 1.3		Equipment not otherwise specified in the table			
(√)		Description	Number of Sources	Cost	Applicable Fee
☐	1.3.1	Equipment with a flow rate of less than or equal to 1.5 m^3 /second		x $ 400 =	$
☐	1.3.2	Equipment with a flow rate of greater than 1.5 m^3 /second		x $1,200 =	$
☐	1.3.3	If one or more of the contaminants to which the application relates is not represented in the Ministry of the Environment publication titled "Summary of Point Impingement Standards, Point of Impingement Guidelines and Ambient Air Quality Criteria (AAQCs)" dated, September 2001 as amended from time to time.	N/A	$300	$

TOTAL COST TABLE 1	$

Equipment (any plant, structure, apparatus, mechanism or thing that will discharge air and contaminants) that is the subject of the application that is not directly specified by Table 1.1 or 1.2 must be placed in one of the two categories in Table 1.3.

For equipment contained in this section of the table, multiple points of emission which satisfy specifically defined conditions of similarity will be considered equivalent to a single source when determining the application fee for a Certificate of Approval (Air).

The term “source” is defined in *Ontario Reg. 363/98, Fees – Certificates of Approval* as follows:

> “source” means an individual point of emission or a distinct process or area from which emissions may originate, and,
>
> (a) if more than one stack or vent arises from a common process, that process is a source and the individual points or emission are not sources, and
> (b) if two or more separate processes, each of which discharges a distinct mixture of contaminants, are discharged to a common stack, each of the separate processes is a source.

Points of emission are considered “similar” if they satisfy the following conditions:

(a) equivalent process activity;
(b) common contaminant emissions;
(c) emissions estimates are calculated using equivalent methods or formulas (with an allowance for modified process parameters); and
(d) dispersion calculations are performed according to equivalent methods (with an allowance for modified process parameters) and considering equivalent Points of Impingement.

TABLE 2: *Emission Summary and Dispersion Modelling Report Review*

This table is to be used for new equipment applications at existing facilities or for amendments to existing approvals. Applicants must identify the number of sources described in the ESDM Report with contaminants common to the equipment forming the subject of the application to determine the cost as outlined in the table. Sources that have been approved and do not emit common contaminants do not have to be included in the determination of the number of sources.

(√)	Number of Sources	Previously Reviewed?	Cost
☐	5 or less	No	$ 0
☐		Yes	$ 0
☐	6 to 10	No	$ 1,000
☐		Yes	$ 800
☐	11 to 20	No	$ 2,000
☒		Yes	$ 1,600
☐	More than 20	No	$ 3,000
☐		Yes	$ 2,400
		TOTAL COST TABLE 2	$ 1600

A “source” may include multiple points of emission, provided the points of emission are “similar”.

Points of emission are considered "similar" if they satisfy the following conditions:

(a) equivalent process activity;
(b) common contaminant emissions;
(c) emissions estimates are based on equivalent methods or formulas (with an allowance for modified process parameters); and
(d) dispersion calculations are performed according to equivalent methods (with an allowance for modified process parameters) and considering equivalent Points of Impingement

When the ESDM Report is only for new sources, not previously approved, there is no cost for this review; it is included in the fixed cost for the particular discharge or equipment calculated under Table 1.

An ESDM Report may be considered previously reviewed when the equipment specified in the ESDM Report has been used to obtain a Certificate of Approval (Air) for that equipment in the past.

TABLE 3: *Noise Assessment Review*

This table is to be used for new applications or for amendments or revocation to an existing approval. Applicants must complete the Noise Screening Procedure included as an appendix in the ministry Document “Guide to Applying for Approval (Air and Noise)" dated January, 2005. If an applicant meets the screening requirements then no fee is required under this table. If the applicant does not meet the screening requirements and an Acoustic Assessment Report is required then the Applicants must identify all equipment that is included as a noise source in the Acoustic Assessment Report in the appropriate category on the following table. Sections used should be indicated within the left hand column. Equipment that has been previously approved does not have to be included on the table provided that the existing approved equipment is not being modified by the application.

Table 3.1 Equipment Subject to Individual Fees

(√)	Description		Quantity of Equipment		Cost	Applicable Fee
			Formula to Calculate A	A		
☐	3.1.1	Arc Furnaces	# of pieces		x $2,250 =	$
☐	3.1.2	Asphalt Plants	# of pieces		x $2,250 =	$
☐	3.1.3	Blow Down Devices	# of pieces		x $2,250 =	$
☐	3.1.4	Co-generation Facilities	# of pieces		x $2,250 =	$
☐	3.1.5	Crushing Operations	# of pieces		x $2,250 =	$
☐	3.1.6	Flares	# of pieces		x $2,250 =	$
☐	3.1.7	Gas Turbines	# of pieces		x $2,250 =	$
☐	3.1.8	Pressure Blowers or Large Induced Draft Fans (flow rate > 47m^3/second or static pressure > 1.25 kilopascals)	# of pieces		x $2,250 =	$

Table 3.2 Equipment Not Otherwise Specified in the Table

(√)	Description		First 5 Pieces of Equipment	Additional Equipment	Cost
☐	3.2.1	Equipment that has not previously been reviewed by the Section 9 Director in connection with an application for a certificate of approval with respect to the facility	$400	$100 x _____	$
☐	3.2.2	Equipment is identical to equipment for which a noise assessment was previously reviewed by the Section 9 Director in connection with an application for a certificate of approval with respect to the facility	$200	$50 x _____	$

TOTAL COST TABLE 3	$

SECTION 2: Revocation of an Existing Approval that Requires Technical Review
Complete tables 1, 2 & 3 and enter your information in the summary table below

(√)		Category	Cost
☐	A	Administrative processing (always required for all applications)	$ 200
☐	B	Fixed Cost Review for Equipment (Table 1)	$
☐	C	Emission Summary and Dispersion Modelling Report Review (Table 2)	$
☐	D	Noise Assessment Review (Table 3)	$
		TOTAL COST:	$

SECTION 3: *Administrative Amendment of an Existing Approval*

(√)	Description	Cost
☐	Administrative amendment (no technical review involved)	$ 100
	TOTAL COST:	$

SECTION 4: *Fee Exempted Amendment or Revocation of an Existing Approval that does not require technical review*

(√)	Description	Cost
☐	Administrative revocation (no technical review involved)	$ 0
☐	Any revocation requested as a result of requirements imposed by conditions of an existing approval	$ 0
☐	Any amendment requested as a result of requirements imposed by conditions of an existing approval	$ 0
	TOTAL COST:	$

ATTACHMENT 3

EMISSION SUMMARY AND DISPERSION MODELLING REPORT

EMISSION SUMMARY AND DISPERSION MODELLING REPORT ACME ANYTOWN PLANT

Version 2.0

Acme Inc.
123 Anywhere Street
Anytown, ON

Prepared by:
P.E.S Stacks Inc.
Toronto, ON

September 19, 2008 Project Number 08-5555-050

Version Control

Rev.	Date	Revision Description	Reviewer Initials
1.0	March, 2004	Original ESDM – included in Comprehensive Certificate of Approval (CCofA) Application	JBC
1.1	July, 2005	Change in location of emission source, increased facility usage of methylene chloride	JBC
1.2	March, 2007	New product introduced at the facility	JBC
2.0	September, 2008	PROPOSED – CCofA Application	JBC

TABLE OF CONTENTS

SECTION PAGE

LIST OF APPENDICES

LIST OF TABLES

LIST OF FIGURES

Ministry of the Environment | Ministère de l'Environnement

Ontario

EMISSION SUMMARY AND DISPERSION MODELLING REPORT CHECKLIST

Company Name: Acme Inc.

Company Address: 123 Anywhere Street, Anytown, ON, A1B 2C3

Location of Facility: 123 Anywhere St. Anytown, ON, A1B 2C3

The attached Emission Summary and Dispersion Modeling Report was prepared in accordance with s.26 of O. Reg. 419/05 and the guidance in the MOE document "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July, 2005 and "Air Dispersion Modelling Guideline for Ontario" dated July 2005 and the minimum required information identified in the check-list on the reverse of this sheet has been submitted.

Company Contact: Acme Inc.

Name: Virginia Trust-Worthy

Title: General Manager

Phone Number: (905) 555 - 1985

Signature: Virginia Trust-Worthy

Date: September 19, 2008

Technical Contact:

Name: Joe Consultant

Representing: P.E.S. Stacks Inc.

Phone Number: (905) 555 - 2345

Signature: Joe Consultant

Date: September 19, 2008

 * This checklist is taken from the document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July, 2005

EMISSION SUMMARY AND DISPERSION MODELLING REPORT CHECKLIST

	Required Information			
			Submitted	Explanation/Reference
	Executive Summary and Emission Summary Table			
	1.1	Overview of ESDM Report	☒ Yes	Executive Summary
	1.2	Emission Summary Table	☒ Yes	Executive Summary
1.0	**Introduction and Facility Description**			
	1.1	Purpose and Scope of ESDM Report (when report only represents a portion of facility)	☒ Yes	Section 1.1
	1.2	Description of Processes and NAICS code(s)	☒ Yes	Section 1.2
	1.3	Description of Products and Raw Materials	☒ Yes	Section 1.3
	1.4	Process Flow Diagram	☒ Yes	Section 1.4 & Figure 4
	1.5	Operating Schedule	☒ Yes	Section 1.5
2.0	**Initial Identification of Sources and Contaminants**			
	2.1	Sources and Contaminants Identification Table	☒ Yes	Section 2.1 & Table 1
3.0	**Assessment of the Significance of Contaminants and Sources**			
	3.1	Identification of Negligible Contaminants and Sources	☒ Yes	Section 3.1
	3.2	Rationale for Assessment	☒ Yes	Section 3.2 & Appendix B
4.0	**Operating Conditions, Emission Estimating and Data Quality**			
	4.1	Description of operating conditions, for each significant contaminant that results in the maximum POI concentration for that contaminant	☒ Yes	Section 4.1 & Appendix A
	4.2	Explanation of Method used to calculate the emission rate for each contaminant	☒ Yes	Section 4.2 & Appendix A
	4.3	Sample calculation for each method	☒ Yes	Section 4.3 & Appendix A
	4.4	Assessment of Data Quality for each emission rate	☒ Yes	Section 4.4
5.0	**Source Summary Table and Property Plan**			
	5.1	Source Summary Table	☒ Yes	Section 5.1 & Table 2
	5.2	Site Plan (scalable)	☒ Yes	Section 5.2 & Figure 3
6.0	**Dispersion Modelling**			
	6.1	Dispersion Modelling Input Summary Table	☒ Yes	Section 6.1 & Table 3
	6.2	Land Use Zoning Designation Plan	☒ Yes	Section 6.2 & Figure 2
	6.3	Dispersion Modelling Input and Output Files	☒ Yes	Section 6.3 & Appendix C
7.0	**Emission Summary Table and Conclusions**			
	7.1	Emission Summary Table	☒ Yes	Section 7.1 & Table 4
	7.2	Assessment of Contaminants with no MOE POI Limits	☒ Yes	Section 7.2
	7.3	Conclusions	☒ Yes	Section 7.3
	Appendices (Provide supporting information or details such as…)			
	Supporting Calculations		☒ Yes	Appendix A
	Supporting Information for Assessment of Negligibility		☒ Yes	Appendix B
	Dispersion Modelling Printouts		☒ Yes	Appendix C
	Material Safety Datasheets		☒ Yes	Appendix D
			☐ Yes	
			☐ Yes	
			☐ Yes	

 * This checklist is taken from the document titled “Procedure for Preparing an Emission Summary and Dispersion Modelling Report” dated July, 2005

EXECUTIVE SUMMARY AND EMISSION SUMMARY TABLE

This Emission Summary and Dispersion Modelling (ESDM) Report was prepared to support an application to extend the operational flexibility of the Basic Comprehensive Certificate of Approval (Air & Noise) (CofA [Air & Noise]). The ESDM Report was prepared in accordance with s.26 of O. Reg. 419/05 to support the Basic Comprehensive CofA (Air & Noise) application. In addition, guidance in the Ontario Ministry of the Environment (MOE) publication "*Procedure for Preparing an Emission Summary and Dispersion Modelling Report*" dated July 2005 (ESDM Procedure Document) was followed as appropriate.

Acme Inc. operates a manufacturing facility located at 123 Anywhere Street in Anytown, Ontario (the Facility). The Facility is located in an area zoned for industrial use.

Acme Inc. produces coated metal products for the aviation industry. The main manufacturing process consists of coating metal components with a solvent based coating. The North American Industry Classification System (NAICS) code that best applies to this facility is 336411 – Aerospace Product and Parts Manufacturing, which is part of NAICS code 336 – Transportation Equipment Manufacturing listed in Schedule 5 of O.Reg. 419/05.

This application and supporting documentation were prepared in accordance with all applicable regulatory and Ministry requirements that were in effect at the time of application.

The Facility was constructed prior to November 30, 2005 and no speed-up notices under s.20(4) or s.20(5) have been requested or issued to the Facility. The NAICS code that applies to this Facility is 336410 which is listed in Schedule 5 of O.Reg.419/05. As such, s.18 of O.Reg.419/05 currently applies, and s.20 of O.Reg.419/05 will apply on February 1st, 2013. Therefore, assessment of compliance was performed using the Appendix to Regulation 346 models and the standards listed in Schedule 1 of O.Reg.419/05, as well as the applicable Ministry limits listed in *"Summary of O.Reg. 419 Standards, Point of Impingement Guidelines and Ambient Air Quality Criteria (AAQC)"*, dated February 2008 (List of MOE POI Limits).

The Facility is expected to emit volatile organic compounds and products of combustion. Some of the sources and contaminants were considered negligible in accordance with s.8 of O. Reg. 419/05.

The maximum POI concentrations were calculated based on the operating conditions where all significant sources are operating simultaneously at their individual maximum

rates of production. The maximum emission rates for each significant contaminant emitted from the significant sources were calculated in accordance with s.11 of O. Reg. 419/05 and the data quality assessment follows the process outlined in the requirements of the ESDM Procedure Document.

A POI concentration for each significant contaminant emitted from the Facility was calculated based on the calculated emission rates and the output from the approved dispersion model; the results are presented in the following Emission Summary Table in accordance s.26 of O. Reg. 419/05.

Contaminants released by the Facility that are not found on the List of MOE POI Limits are considered to be 'Contaminants with No MOE POI Limits'. There are three 'Contaminants with No Ministry POI Limits' at the Facility. Jurisdictional Screening Limits (JSLs) now exist on the "*Jurisdictional Screening Level (JSL) List a Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality*" (dated February 2008) for these three (3) contaminants. The POI concentration of n-propoxypropanol remains unchanged from the approved concentration covered in the CofA Application 1234-ABCDEF, dated October 1, 2004 and is now below the JSL. The POI concentration of amyl alcohol is still equal to the approved concentration assessed in the Maximum Concentration Level Assessment submitted by ACME Inc. April 2007 and is now below the JSL The POI concentration of 2-methylbutyl alcohol is above the JSL but remains unchanged from the approved concentrations covered in the CofA Application 1234-ABCDEF, dated October 1, 2004. Therefore, no further action is required for these contaminants with No MOE POI Limits.

Of the remaining 13 contaminants assessed with MOE POI Limits; all the predicted POI concentrations are below the corresponding limits. At 85% xylene has the highest concentration relative to the corresponding MOE POI Limit.

Emission Summary Table

Contaminant Name	CAS Number	Total Facility Emission Rate g/s	Air Dispersion Model Used	Max. POI Concentration µg/m³	Averaging Period (hours)	MOE POI Limit µg/m³	Limiting Effect	Regulation Schedule #	Percentage of MOE POI Limit
Xylene	1330-20-7	9.72	Regulation 346	1,964	0.5	2,300	Odour	1	85%
Toluene	108-88-3	7.77	Regulation 346	1,571	0.5	2,000	Odour	1	79%
2-Ethoxyethyl acetate	111-15-9	0.65	Regulation 346	131	0.5	220	Odour	(G)	60%
Methyl isobutyl ketone	108-10-1	3.24	Regulation 346	655	0.5	1,200	Odour	1	55%
Methyl alcohol	67-56-1	12.96	Regulation 346	2,618	0.5	12,000	Health	1	22%
Glycol Ether EE	110-80-5	0.65	Regulation 346	131	0.5	800	Odour	(G)	16%
Isopropyl alcohol	67-63-0	16.19	Regulation 346	3,273	0.5	24,000	Health	(G)	14%
Trichloroethylene	79-01-6	2.27	Regulation 346	458	0.5	3,500	Interim	1	13%
NO_x	10102-44-0	0.28	Regulation 346	57	0.5	500	Health	1	11%
N-butyl alcohol	71-36-3	0.65	Regulation 346	131	0.5	2,278	Odour	(G)	6%
Methyl ethyl ketone	78-93-3	2.27	Regulation 346	458	0.5	30,000	Interim	1	2%
Methylene Chloride	75-09-2	0.56	Regulation 346	112	0.5	5,300	Health	(G)	2%
Ethanol	64-17-5	0.65	Regulation 346	131	0.5	19,000	Odour	(G)	1%
2 Methylbutyl Alcohol	137-32-6	0.32	Regulation 346	65 *	0.5	N/A	N/A	N/A	Below previously approved POI
n Propoxypropanol	1569-01-3	0.65	Regulation 346	131 *	0.5	1,560	N/A	JSL	Below JSL
Amyl Alcohol	71-41-0	0.32	Regulation 346	131 **	0.5	360	N/A	JSL	Below JSL

Notes on Column labelled Regulation Schedule #

1 refers to Standards in Schedule 1 of O. Reg. 419/05

(G) refers to criteria identified as POI Guideline in the document "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution – Local Air Quality" dated February 2008.

* Approved concentration covered in the CofA Application 1234-ABCDEF, dated October 1, 2004.

** Approved concentration covered in the Maximum Concentration Level Assessment submitted by ACME in April 2007.

JSL refers to Jurisdictional Screening Limit the "Jurisdictional Screening Level (JSL) List A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality" dated February 2008.

1.0 INTRODUCTION AND FACILITY DESCRIPTION

This section provides a description of the facility as required by sub paragraph 1 of s.26(1) of O. Reg. 419/05.

ACME operates a manufacturing facility located at 123 Anywhere Street, Anytown, Ontario (the Facility).

The location of the Facility is presented in Figure 1 – Site Location Plan and the land use designation of the site and surrounding area is presented in Figure 2 – Land Use Zoning Designation Plan. The location of the discharges from each of the sources is presented in Figure 3 – Site Plan and Roof Layout; the location of each of the sources is specified with the source reference number.

1.1 Purpose and Scope of ESDM Report

This ESDM Report was prepared to support an application for a renewed Basic Comprehensive Certificate of Approval (Air & Noise) (CofA [Air & Noise]) for all sources at the facility.

The Facility is currently approved to operate under Basic Comprehensive CofA No.1234-ABCDEF, October 1, 2004. The Limited Operational Flexibility for the facility expires on October 1, 2009 and therefore the application for renewal is being made.

This Emission Summary and Dispersion Modelling (ESDM) Report was prepared in accordance with s.26 of O. Reg. 419/05. In addition, guidance in the Ontario Ministry of the Environment (MOE) publication "*Procedure for Preparing an Emission Summary and Dispersion Modelling Report*" dated July 2005 (ESDM Procedure Document) PIBS 3614e02 was followed as appropriate.

For ease of review and to promote clarity this ESDM Report is structured to correspond to each of the items listed in the MOE publication "*2005 Emission Summary and Dispersion Modelling Check-List*" PIBS 5357e.

1.2 Summary of Modification Log

Below is a summary of changes that the ESDM Report has undergone since Version 1.0 was completed in 2004:

Rev.	Date Changed	Description of Change	Emission Summary and Dispersion Modelling Report Changes
1.0	March, 2004	Original ESDM – included in Comprehensive Certificate of Approval Application	N/A
1.1	July, 2005	Change in location of emission source, increased facility usage of methylene chloride	• Updated figures to reflect change in location of emission source S-7 • Updated Emission Summary Table to reflect increase in usage of methylene chloride
1.2	March, 2007	Updated Tables to reflect new product use at the facility	• Amyl alcohol added as a contaminant to the ESDM Report
1.3	September, 2008	PROPOSED – CCofA Application	• Updated ESDM text to include Summary of Modifications Log • Updated Emission Summary Table with new (February 2008) MOE POI Limits and Jurisdictional Screening Limits (JSL)

1.3 Description of Processes and NAICS Code(s)

Acme Inc. produces coated metal products for use in the aviation industry. The main manufacturing process consists of coating metal components with a solvent based coating. The metal parts are fabricated elsewhere; the operations at the Facility are limited to the coating process.

The North American Industry Classification System (NAICS) code that best applies to the Facility is 336411 – Aerospace Product and Parts Manufacturing, which is part of

NAICS code 336 – Transportation Equipment Manufacturing listed in Schedule 5 of O.Reg. 419/05.

The Facility is located in an industrial zoned area. Construction of the Facility started in October of 1999. Therefore, s.18 of O. Reg. 419/05 currently applies to the Facility and the modelled impact to half-hour Point of Impingement (POI) criteria can be assessed using the model in the Appendix to Ontario Regulation 346/90.

1.4 Description of Products and Raw Material

There are two production areas at the Facility: the main production booth and a smaller custom production area. There is also a research and development operation that has a small coating operation.

The coating is a resin based mixture containing volatile organic compounds. The coating is applied to the parts using a dip tank technique. Prior to being dipped the metal parts are wiped with a solvent mixture in a preparation booth.

The coating is received and loaded into a storage tank. When a new batch is needed, the coating is pumped in a closed-looped system to a mixing tank where very small amounts of additives are blended into the batch. The batch is then pumped to a tank which is indirectly heated by a thermal oil circuit from a natural gas fired boiler. Before the batch is heated the tank is sealed and nitrogen gas is pumped in to a pressure of 1.5 atmospheres. The tank is then heated until the mixture reaches a temperature of 130 degrees Celsius, at which time the tank is vented and the mixture is pumped to the coating tank.

There are also some supporting operations at the Facility, namely: natural gas fired heating and ventilating equipment, a natural gas fired boiler to heat the thermal oil and a maintenance area with some minor welding.

Product usages and process information are provided in greater detail in Appendix A - Supporting Calculations. Refer to Table 1 – Sources and Contaminants Identification Table, which tabulates the individual sources of emissions at the Facility.

1.5 Process Flow Diagram

Refer to Figure 4 – Process Flow Diagram for a graphical representation of the manufacturing operation processes at the Facility.

1.6 Operating Schedule

The Facility operates from 8:30 am to 5:30 pm, seven days a week, up to 50 weeks per year. The various production processes operate up to eight hours a day.

1.7 Facility Production Limit

Since operations began in 1999, the Facility increased production through debottlenecking and process efficiency improvements until the current production levels have been reached. The following summarizes the yearly production of coated metal parts.

Year	Production (Number of Coated Parts)
1999	125,986
2000	801,398
2001	944,254
2002	982,665
2003	1,045,665
2004	945,654
2005	1,101,567
2006	987,453
2007	1,185,225
2008 (ytd)	981,593

Based on current market demands and the current installed capacity at the Facility, the projected production rate over the next 5 years will remain at a maximum of 1,200,000 coated metal parts per year.

2.0 INITIAL IDENTIFICATION OF SOURCES AND CONTAMINANTS

This section provides an initial identification of all of the sources and contaminants emitted at the Facility, as required by subparagraphs 2 to 4 of s.26(1) of O. Reg. 419/05.

There may be general ventilation from the Facility that only discharges uncontaminated air from the workspaces or air from the workspace that may include contaminants that come from commercial office supplies, building maintenance products or supplies and activities; these types of ventilation sources are considered to be negligible and were not identified as sources at the Facility.

It should be noted that general ventilation located in the process area that does not vent process emissions is also considered to be negligible.

2.1 Sources and Contaminants Identification Table

Table 1 – Sources and Contaminants Identification Table tabulates all the emission sources at the Facility; for example, the Main Production Line is identified as a source.

The expected contaminants emitted from each source are also identified in Table 1; for example, the expected contaminants emitted from the Main Production Line are identified as a significant source of volatile organic compounds. Each of the identified sources has been assigned a source reference number; for example, the Main Production line has been designated S-1.

The location of the discharges from each significant source is presented in Figure 3 – Site Plan and Roof Layout; the location of each of the sources is specified with the source reference number.

3.0 ASSESSMENT OF THE SIGNIFICANCE OF CONTAMINANTS AND SOURCES

This section provides information and rationale for the identification of negligible contaminants and sources. This allows facilities with a large quantity of sources and contaminants to focus on a more detailed analysis of emissions and POI concentrations of the significant contaminants and sources.

As required by paragraph 2 of subsection 26(1) of O.Reg. 419/05, Table 1 – Sources and Contaminants Identification Table, contains a list of all contaminants that are discharged from the property and for each of those contaminants, a list of all the sources of contaminant that are located on the property.

In accordance with section 8 of O.Reg. 419/05, some of the contaminants and sources listed in Table 1 have been identified as negligible, and have therefore been excluded from further analysis and from the air dispersion modelling.

3.1 Identification of Negligible Contaminants and Sources

Of all the twelve sources listed in Table 1 – Sources and Contaminants Identification Table, eight sources have been identified as insignificant. As required by paragraph 3 of subsection 26(1) of O.Reg. 419/05, an explanation of how it was determined that each source of contaminant discharges a negligible amount of the contaminant is also provided in the table.

For example, the R&D Area (S-3) has been identified as an insignificant source, as all the contaminants discharged from this source have been identified as being discharged in negligible amounts.

3.2 Rationale for Assessment

For each source in Table 1 that has been identified as being negligible there is an accompanying documented rationale; for example, the rationale for S-3 is a semi-qualitative argument. The technical information required to substantiate the argument that each of the identified sources is negligible is presented in Appendix B of this ESDM Report – Supporting Information for Assessment of Negligibility.

For each contaminant in Table 1 that has been identified as being negligible there is an accompanying rationale, for example the rationale for the conclusion that emission of acetone from source S-7 is negligible is listed as threshold calculator. The technical

information required to substantiate this conclusion is presented in Appendix B of this ESDM Report – Supporting Information for Assessment of Negligibility.

4.0 OPERATING CONDITIONS, EMISSION ESTIMATING AND DATA QUALITY

This section provides a description of the operating conditions used in the calculation of the emission estimates and an assessment of the data quality of the emission estimates for each significant contaminant from the facility, as required by sub paragraphs 6 and 7 of s.26(1) of O. Reg. 419/05.

4.1 Description of Operating Conditions

Paragraph 1 of subsection 10(1) of O.Reg. 419/05 states that the approved dispersion model must be used with operating conditions that result in the maximum POI concentration for each significant contaminant, according to the averaging period for the relevant MOE POI Limit corresponding to that contaminant. The operating condition that corresponds to the maximum POI concentration may occur when the Facility is at the maximum production level or running at a lower production level or the process is in transition.

In preparing this ESDM report, all operating scenarios for all the significant sources at the Facility were assessed for the contaminants that are relevant to this application for a certificate of approval under section 9 of the EPA. For each significant contaminant, and according to the averaging period for the relevant MOE POI limit corresponding to that contaminant, the operating scenario used for this Facility that results in the maximum POI concentration is the scenario where all significant sources are operating simultaneously at their individual maximum rates of production.

In accordance with paragraph 6 of subsection 26(1) of O.Reg.419/05, Appendix A of this ESDM Report includes a description of the operating condition for each contaminant that is emitted in significant amounts, including a description of the operating conditions of the significant sources that result in the maximum POI concentration for the contaminant, ensuring that the operating conditions correspond to the averaging period of the MOE POI Limit(s).

4.2 Explanation of the Methods Used to Calculate Emission Rates

The maximum half-hour emission rates for each significant contaminant emitted from the significant sources were estimated and the methodology for the calculation is documented in Table 2 – Source Summary Table. All emission rates were calculated in accordance with requirements of the ESDM Procedure Document.

The emission rate for each significant contaminant emitted from a significant source was estimated and the methodology for the calculation is documented in Table 2 – Source Summary Table. For example, the emission of toluene from the Main Production Line (S-1) was calculated using a mass balance (MB) technique.

4.3 Sample Calculations

The technical rationale, including sample calculations, required to substantiate the emission rates presented in Table 2 – Source Summary Table is documented in Appendix A – Supporting Calculations.

4.4 Assessment of Data Quality

This section provides a description of the assessment of the data quality of the emission estimates for each significant contaminant from the Facility, as required by sub paragraph 7iii of s.26 (1) of O. Reg. 419/05.

The assessment of the data quality of the emission rate estimates for each significant contaminant emitted from the significant sources was performed in accordance with the requirements of sub paragraph 7iii of s 26(1) of the O. Reg. 419/05. For example, the mass balance (MB) technique used to calculate the emissions from S-1 is based on the assumption that 100% of the volatile components are emitted at the maximum rate that they are used. Therefore, the emission rate estimate is not likely to be an underestimate of the actual emission rate and use of these emission rates will result in calculated concentrations at a POI greater than the actual concentrations. This source was documented as having a Data Quality of “Above-Average”, which is generally acceptable according to requirements of the ESDM Procedure Document

For each contaminant the emission rate was estimated and the data quality of the estimate is documented in Table 2 – Source Summary Table. The assessment of data quality for each source listed in Table 2 is documented in Appendix A – Supporting Calculations.

All the emission rates listed in Table 2 are documented as having “Above-Average” data quality and correspond to the operating scenario where all significant sources are operating simultaneously at their individual maximum rates of production. Therefore, the emission rate estimates listed in Table 2 are not likely to be an underestimate of the actual emission rates and use of these emission rates will result in calculated concentrations at a POI greater than the actual concentrations.

5.0 SOURCE SUMMARY TABLE AND SITE PLAN

This section provides the table required by sub paragraph 8 and the site plan required by sub paragraph 9 of s.26(1) O. Reg. 419/05.

5.1 Source Summary Table

The emission rate estimates for each source of significant contaminants are documented in Table 2 – Source Summary Table in accordance with requirements of sub paragraph 8 of s.26(1) of O. Reg. 419/05.

5.2 Site Plan

The locations of the emission sources listed in Table 2 – Source Summary Table are presented in Figure 3 – Site Plan and Roof Layout; the location of each of the sources is specified with the source reference number. The location of the property-line is indicated on Figure 3, with the end points of each section of the property-line clearly referenced to a Cartesian coordinate system. The location of each source is referenced to this Cartesian coordinates system under a column in Table 2 – Source Summary Table.

The heights of the structures that are part of the Facility are labelled as “Roof Height” in Figure 3 – Site Plan and Roof Layout.

6.0 DISPERSION MODELLING

This section provides a description of how the dispersion modelling was conducted for the Facility to calculate the maximum concentration at a POI, as required by sub paragraphs 10 to 13 of s.26(1) of O. Reg. 419/05.

The dispersion modelling was conducted in accordance with the MOE publication “*Air Dispersion Modelling Guideline for Ontario*” PIBS 5165e (ADMGO).

The Facility is subject to s.18 of O. Reg. 419/05 and therefore the modelled impact of contaminant emissions can be assessed as half-hour maximum POI concentrations. The appropriate model to assess the half-hour maximum POI impact is the model in the Appendix to Ontario Regulation 346/90.

The emission rates used in the dispersion model meet the requirements of s.11(1)1 of O. Reg. 419/05, which requires that the emission rate used in the dispersion model is at least as high as the maximum emission rate that the source of contaminant is

reasonably capable of for the relevant contaminant. These emission rates are further described in Appendix A – Supporting Calculations.

The Facility has one point source identified as S-10 in Figure 3 and one virtual source identified as Source A in Figure 3 – Site Plan and Roof Layout.

The length and width of Source A were determined by constructing a rectangle of best fit around the building. The height of the highest structure of the building (7.62 metres above grade) was used for the virtual source height. The height of exhaust stack serving point source S-10 is 15.3 metres above grade, which is more than twice the height of the building on which it is located.

The location of the point source, (S-10) as well as the location of the virtual source (Source A) wind oriented centre and its width and length are shown on Figure 3. The location of the property line in relation to the dispersion modelling sources is also presented in Figure 3.

The half-hour maximum POI impact was determined using the MAXGLC module of the MOE dispersion modelling package.

There is no child care facility, health care facility, senior's residence, long-term care facility or an educational facility located at the Facility. Furthermore, the nearest POI is located more than 5 metres from the building on which the point of emissions are located. As such, same structure contamination was not considered.

6.1 Emitted Contaminants

6.1.1 NO_X Emissions

NO_X is emitted from both the specific point source and from many separate sources associated with the virtual source. A model run with the specific NO_X emission rates associated with the point and virtual source was conducted. The result was a predicted maximum concentration of 32.33 µg/m³ at the property line.

6.1.2 Other Contaminants

All other contaminants are emitted only from the virtual source, Source A. Therefore, the Facility was modelled using a unit emission rate of 1 g/s. The result was a predicted maximum concentration of 202.08 µg/m³ at the property line for each 1 g/s emission of a contaminant, this ratio is known as a Dispersion Factor. To calculate the maximum concentration at the property line POI for each emitted substance, the virtual source

Dispersion Factor was multiplied by the emission rate of that substance. For example, the total emission of toluene from the Facility (associated with Source A) is 7.77 g/s, which when multiplied by 202.08 results in 1570 µg/m^3.

6.2 Dispersion Modelling Input Summary Table

A description of the way in which the approved dispersion model was performed is included as Table 3 – Dispersion Modelling Input Summary Table. This table meets both the requirements of s.26(1)11 and sections 8-17 of O. Reg. 419/05 and follows the format provided in the ESDM Procedure Document. Furthermore, the dispersion modelling input parameters are summarized in Table 4 – Dispersion Modelling Source Summary Table. Although not required by s.26 of O. Reg. 419/05, this table simplifies the data presentation.

6.3 Land Use Zoning Designation Plan

Sub paragraph 10 of s.26(1) of O. Reg. 419/05 requires a description of the local land use conditions if meteorological data described in paragraph 2 of s.13(1) of O. Reg. 419/05 was used. The dispersion modelling at the site did not use meteorological data described in paragraph 2 of s.13(1) therefore a description of the local land use conditions is not required. However, Figure 2 – Land Use Zoning Designation Plan does illustrate the nearby land use.

6.4 Dispersion Modelling Input and Output Files

The information inputted into the approved dispersion model is provided in Appendix C – Dispersion Modelling. Appendix C also includes a print-out of output files from the O. Reg. 346 dispersion model. There are two modelling runs presented, one titled Dispersion Factor and the other NO_X Emissions.

Electronic copies of the input files for the model in the Appendix to Ontario Regulation 346/90 have not been submitted with this report due to the simplicity of the model.

7.0 EMISSION SUMMARY TABLE AND CONCLUSIONS

This section provides the table required by sub paragraph 14 of s.26(1) of O. Reg. 419/05 and provides an interpretation of the results as required by the ESDM Procedure Document.

7.1 Emission Summary Table

A POI concentration for each significant contaminant emitted from the Facility was calculated based on the emission rates listed in Table 2 – Source Summary Table and the output from the approved dispersion model presented in Appendix C. The results are presented in Table 5 – Emission Summary Table. This table follows the format provided in the ESDM Procedure Document.

The POI concentrations listed in Table 5 were compared against criteria listed in the MOE publication "*Summary of O. Reg. 419 Standards, Point of Impingement Guidelines and Ambient Air Quality Criteria (AAQC)*" dated February 2008 [List of MOE POI Limits].

Of the 16 contaminants assessed, 13 have limits in the List of MOE POI Limits; all the predicted POI concentrations are below the corresponding limits. At 85% xylene has the highest concentration relative to the corresponding MOE POI Limit.

7.2 Assessment of Contaminants with no MOE POI Limits

Sub paragraph 14 subsection viii of s.26(1) O. Reg. 419/05 requires an indication of the likelihood, nature and location of any adverse effect if the contaminant is not listed in any of Schedules 1, 2 and 3.

Contaminants released by the Facility that are not found on the List of MOE POI Limits are considered to be 'Contaminants with No MOE POI Limits'. There are three 'Contaminants with No Ministry POI Limits' at the Facility. Jurisdictional Screening Limits (JSLs) now exist on the "*Jurisdictional Screening Level (JSL) List A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality*" (dated February 2008) for these three (3) contaminants.

The POI concentration of n-propoxypropanol remains unchanged from the approved concentration covered in the CofA Application 1234-ABCDEF, dated October 1, 2004. and is now below the JSL.

The POI concentration of amyl alcohol is still equal to the approved concentration assessed in the Maximum Concentration Level Assessment submitted by ACME Inc. April 2007 and is now below the JSL

The POI concentration of 2-methylbutyl alcohol is above the JSL but remains unchanged from the approved concentrations covered in the CofA Application 1234-ABCDEF, dated October 1, 2004.

7.3 Conclusions

This ESDM Report was prepared in accordance with s.26 of O. Reg. 419/05. In addition, guidance in the ESDM Procedure Document was followed, as applicable.

The Facility is subject to s. 18 of O. Reg. 419/05, therefore the modelled impact of contaminant emissions can be assessed as a half-hour maximum POI concentration. The appropriate model to assess the half-hour maximum POI impact is the model in the Appendix to Ontario Regulation 346/90.

The emission rate estimates for each source of significant contaminants are documented in Table 2 – Source Summary Table. All the emission rates listed in Table 2 are documented as having a data quality of “Above-Average” and correspond to the operating scenario where all significant sources are operating simultaneously at their individual maximum rates of production. Therefore, the emission rate estimates listed in Table 2 are not likely to be an underestimate of the actual emission rates.

A POI concentration for each significant contaminant emitted from the Facility was calculated based on the calculated emission rates and the output from the model in the Appendix to Ontario Regulation 346; the results are presented in Table 5 - Emission Summary Table.

The POI concentrations listed in Table 5 were compared against List of Ministry POI Limits.

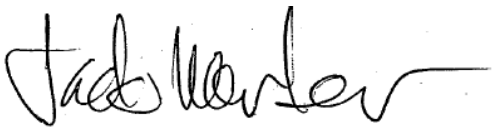
Of the 16 contaminants assessed, 13 have limits in the List of MOE POI Limits; all the predicted POI concentrations are below the corresponding limits. At 85% xylene has the highest concentration relative to the corresponding MOE POI Limit.

There are three ‘Contaminants with No Ministry POI Limits’ listed in Table 5. The POI concentrations of these compounds are either below a corresponding JSL value or remain unchanged from the approved concentrations covered in the CofA Application

1234-ABCDEF, dated October 1, 2004. Therefore, no further action is required for these contaminants with No MOE POI Limits.

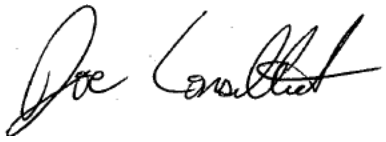
This ESDM Report demonstrates that the Facility can operate in compliance with s.18 of O. Reg. 419/05. P.E.S. Stacks recommends that a renewed Basic Comprehensive CofA (Air & Noise) be issued for the Facility.

Prepared by:



Jack Worker
P.E.S Stacks Inc.

Reviewed by:



Joe Consultant
P.E.S Stacks Inc.

Table 1
Sources and Contaminants Identification Table
Acme Anytown Plant

Source Information			Expected Contaminants	Significant (Yes or No?)	Rationale
Source ID	**Source Description**	**Location**			
S-1	Main Production Line	Source A	Volatile Organic Compounds	Yes	
			Speciality Additives	No	Deminimus (See Appendix B)
			Ethanol, Isopropyl alcohol	No	Threshold Calculator (See Appendix B)
S-2	Custom Production Area	Source A	Volatile Organic Compounds	Yes	
			Speciality Additives	No	Deminimus (See Appendix B)
			Ethanol, Isopropyl alcohol	No	Threshold Calculator (See Appendix B)
S-3	R&D Area	Source A	Volatile Organic Compounds	No	Sources that are Insignificant Relative to Total Emissions This line uses the same type of material as the main production line but at a much lower rate of 1 kg/hour compared to 212 kg/hour (See Appendix B)
S-4	Repair Booth	Source A	Volatile Organic Compounds	No	Sources that are Insignificant Relative to Total Emissions This line uses the same type of material as the main production line but at a much lower rate of 2.1 kg/hour compared to 212 kg/hour (See Appendix B)
S-5	Maintenance Shop	Source A	Welding Fumes	No	Listed in Table B3 of the ESDM Procedure Document
S-6	Nitrogen Blanket Tank	Source A	Nitrogen	No	Listed in Table B3 of the ESDM Procedure Document
S-7	Preparation Booth	Source A	Acetone	No	Threshold Calculator (See Appendix B)
			Methlyene chloride	Yes	
S-8	Coating Storage Tanks	Source A	Volatile Organic Compounds	No	Sources that are Insignificant Relative to Total Emissions (See Appendix B) These tanks store the material used in the Main Production Line. The losses while filling will be much lower than the emissions from the Main Production Line. (See Appendix B)
S-9	Coating Mixing Tank	Source A	Volatile Organic Compounds	No	Sources that are Insignificant Relative to Total Emissions This tank is used to mix up the material before use, the losses while filling will be much lower than the emissions from the Main Production Line (See Appendix B)
S-10	Natural Gas Combustion and Heating Equipment	Source A S-10 (H-17)	Products of combustion	Yes	Only NOx Emissions (See Appendix B)
S-11	Roads, Parking Lot		Dust	No	Not listed in Table 7-2 or 7-3 of Section 7.4 of the ESDM Procedure Document (See Appendix B)
S-12	General Ventilation	Process Area	None	No	Process emissions are not emitted through general ventilation and as such, have not been presented on Figure 4

Table 2
Source Summary Table
Acme Anytown Plant

Source Identifier	Source Description	Source Parameters						Emission Data						
		Stack Volumetric Flow Rate [Am³/s]	Stack Exit Gas Temperature [°C]	Stack Inner Diameter [m]	Stack Height Above Grade [m]	Stack Height Above Roof [m]	Source Coordinates (x,y) [m]	Contaminant	CAS No.	Maximum Emission Rate [g/s]	Averaging Period [hours]	Emission Estimating Technique	Emissions Data Quality	Percentage of Overall Emissions [%]
S-1	Main Production Line	5.30	35	0.6	7.2	1.0	7, 30	Toluene	108-88-3	7.07E+00	0.5	MB	Above-Average	90.9%
								Xylene	1330-20-7	8.83E+00	0.5	MB	Above-Average	90.9%
								Methyl isobutyl ketone	108-10-1	2.94E+00	0.5	MB	Above-Average	90.9%
								Methyl alcohol	67-56-1	1.18E+01	0.5	MB	Above-Average	90.9%
								2-Ethoxyethyl acetate	111-15-9	5.89E-01	0.5	MB	Above-Average	90.9%
								Trichloroethylene	79-01-6	2.06E+00	0.5	MB	Above-Average	90.9%
								Glycol Ether EE	110-80-5	5.89E-01	0.5	MB	Above-Average	90.9%
								Methyl ethyl ketone	78-93-3	2.06E+00	0.5	MB	Above-Average	90.9%
								Isopropyl Alcohol	67-63-0	1.47E+01	0.5	MB	Above-Average	90.9%
								Ethanol	64-17-5	5.89E-01	0.5	MB	Above-Average	90.9%
								N-butyl alcohol	71-36-3	5.89E-01	0.5	MB	Above-Average	90.9%
								2-Methylbutyl alcohol	137-32-6	5.89E-01	0.5	MB	Above-Average	90.9%
								Amyl Alcohol	71-41-0	2.94E-01	0.5	MB	Above-Average	90.9%
								n-propoxypropanol	1569-01-3	5.89E-01	0.5	MB	Above-Average	90.9%
S-2	Custom Production Area	3.20	30	0.45	6.9	0.7	78, 48	Toluene	108-88-3	7.07E-01	0.5	MB	Above-Average	9.1%
								Xylene	1330-20-7	8.83E-01	0.5	MB	Above-Average	9.1%
								Methyl isobutyl ketone	108-10-1	2.94E-01	0.5	MB	Above-Average	9.1%
								Methyl alcohol	67-56-1	1.18E+00	0.5	MB	Above-Average	9.1%
								2-Ethoxyethyl acetate	111-15-9	5.89E-02	0.5	MB	Above-Average	9.1%
								Trichloroethylene	79-01-6	2.06E-01	0.5	MB	Above-Average	9.1%
								Glycol Ether EE	110-80-5	5.89E-02	0.5	MB	Above-Average	9.1%
								Methyl ethyl ketone	78-93-3	2.06E-01	0.5	MB	Above-Average	9.1%
								Isopropyl Alcohol	67-63-0	1.47E+00	0.5	MB	Above-Average	9.1%
								Ethanol	64-17-5	5.89E-02	0.5	MB	Above-Average	9.1%
								N-butyl alcohol	71-36-3	5.89E-02	0.5	MB	Above-Average	9.1%
								2-Methlybuthyl alcohol	137-32-6	5.89E-02	0.5	MB	Above-Average	9.1%
								Amyl Alcohol	71-41-0	2.94E-02	0.5	MB	Above-Average	9.1%
								n-propoxypropanol	1569-01-3	5.89E-02	0.5	MB	Above-Average	9.1%
S-7	Preparation Booth	3.20	30	0.45	6.9	0.7	78, 48	Methylene chloride	75-09-02	5.56E-01	0.5	MB	Above-Average	100.0%
S-10 (H1-H16)	Natural Gas Combustion and	–	–	Variable	Variable	Variable	Variable	NOx	10102-44-0	1.58E-01	0.5	EF	Above-Average	57.1%
S-10 (H17)	Heating Equipment	–	137	0.5	15.3	9.2	64, 93	NOx	10102-44-0	1.22E-01	0.5	EF	Above-Average	42.9%

Table 3
Dispersion Modelling Input Summary Table
Acme Anytown Plant

Relevant Section of the Regulation	Section Title	Description of How the Approved Dispersion Model was Used
Section 8	Negligible Sources	Sources and contaminants that were considered negligible were explicitly identified and therefore, were not modelled, in accordance with s.8 of O. Reg. 419. See Table 1 - Sources and Contaminants Identification Table and Appendix B of the ESDM Report for more information.
Section 9	Same Structure Contamination	Not applicable as Acme Inc. is the only tenant occupying the building and does not have a child care facility, health care facility, senior's residence, long term care facility or an educational facility located at the Facility.
Section 10	Operating Conditions	All equipment was assumed to be operating at the maximum production rates at the same time. See section 4.1 and Appendix A of the ESDM Report.
Section 11	Source of Contaminant Emission Rates	The emission rate for each significant contaminant emitted from a significant source was estimated, the methodology for the calculation is documented in Table 2 – Source Summary Table. See section 4.1 and section 4.2 and Appendix A of the ESDM Report for more information.
Section 12	Combined Effect of Assumptions for Operating Conditions and Emission Rates	The operating conditions were estimated in accordance with s.10(1) 1 and s.11(1) 1 of O. Reg. 419 and are therefore considered to result in the highest concentration at POI that the Facility is capable of for the contaminants emitted. See section 4.1 and section 4.2 of the ESDM Report.
Section 13	Meteorological Conditions	Not applicable as the models in the Appendix to O. Reg. 346 were used.
Section 14	Area of Modelling Coverage	Not applicable as the models in the Appendix to O. Reg. 346 were used.
Section 15	Stack Height for Certain New Sources of Contaminant	Not applicable as s.15 of O. Reg. 419/05 does not apply to the Facility.
Section 16	Terrain Data	Not applicable as the models in the Appendix to O. Reg. 346 were used.
Section 17	Averaging Periods	Maximum half-hour emission rates were used with the models in the Appendix to O. Reg. 346.

Table 4
Dispersion Modelling Sourece Summary Table
Acme Anytown Plant

Modelling ID	Source ID(s)	Source Type	Modelling Source Data					Emissions Data		
			Length [m]	Width [m]	Height [m]	Angle [°]	Source Coordinates (x,y) [m]	Contaminant	CAS No.	Maximum Emission Rate [g/s]
1	S1 S2 S7 S10	Virtual	156.4	94.7	7.62	0	85,58	Toluene	108-88-3	7.77E+00
								Xylene	1330-20-7	9.72E+00
								Methyl isobutyl ketone	108-10-1	3.24E+00
								Methyl alcohol	67-56-1	1.30E+01
								2-Ethoxyethyl acetate	111-15-9	6.48E-01
								Trichloroethylene	79-01-6	2.27E+00
								Glycol Ether EE	110-80-5	6.48E-01
								Methyl ethyl ketone	78-93-3	2.27E+00
								Isopropyl Alcohol	67-63-0	1.62E+01
								Ethanol	64-17-5	6.48E-01
								N-butyl alcohol	71-36-3	6.48E-01
								2-Methylbutyl alcohol	137-32-6	6.48E-01
								Amyl Alcohol	71-41-0	3.24E-01
								n-propoxypropanol	1569-01-3	6.48E-01
								Methylene Chloride	75-09-02	5.56E-01
								NOx	10102-44-0	1.58E-01
2	H17	Point	N/A	N/A	15.3	N/A	64, 93	NOx	10102-44-0	1.22E-01

Table 5
Emission Summary Table
Acme Anytown Plant

Contaminant Name	CAS Number	Total Facility Emission Rate g/s	Air Dispersion Model Used	Max. POI Concentration µg/m³	Averaging Period (hours)	MOE POI Limit µg/m³	Limiting Effect	Regulation Schedule #	Percentage of MOE POI Limit
Xylene	1330-20-7	9.72	Regulation 346	1,964	0.5	2,300	Odour	1	85%
Toluene	108-88-3	7.77	Regulation 346	1,571	0.5	2,000	Odour	1	79%
2-Ethoxyethyl acetate	111-15-9	0.65	Regulation 346	131	0.5	220	Odour	(G)	60%
Methyl isobutyl ketone	108-10-1	3.24	Regulation 346	655	0.5	1,200	Odour	1	55%
Methyl alcohol	67-56-1	12.96	Regulation 346	2,618	0.5	12,000	Health	1	22%
Glycol Ether EE	110-80-5	0.65	Regulation 346	131	0.5	800	Odour	(G)	16%
Isopropyl alcohol	67-63-0	16.19	Regulation 346	3,273	0.5	24,000	Health	(G)	14%
Trichloroethylene	79-01-6	2.27	Regulation 346	458	0.5	3,500	Interim	1	13%
NOx	10102-44-0	0.28	Regulation 346	57	0.5	500	Health	1	11%
N-butyl alcohol	71-36-3	0.65	Regulation 346	131	0.5	2,278	Odour	(G)	6%
Methyl ethyl ketone	78-93-3	2.27	Regulation 346	458	0.5	30,000	Interim	1	2%
Methylene Chloride	75-09-2	0.56	Regulation 346	112	0.5	5,300	Health	(G)	2%
Ethanol	64-17-5	0.65	Regulation 346	131	0.5	19,000	Odour	(G)	1%
2 Methylbutyl Alcohol	137-32-6	0.32	Regulation 346	65 *	0.5	N/A	N/A	N/A	Below previously approved POI
n Propoxypropanol	1569-01-3	0.65	Regulation 346	131 *	0.5	1,560	N/A	JSL	Below JSL
Amyl Alcohol	71-41-0	0.32	Regulation 346	131 **	0.5	360	N/A	JSL	Below JSL

Notes on Column labelled Regulation Schedule #

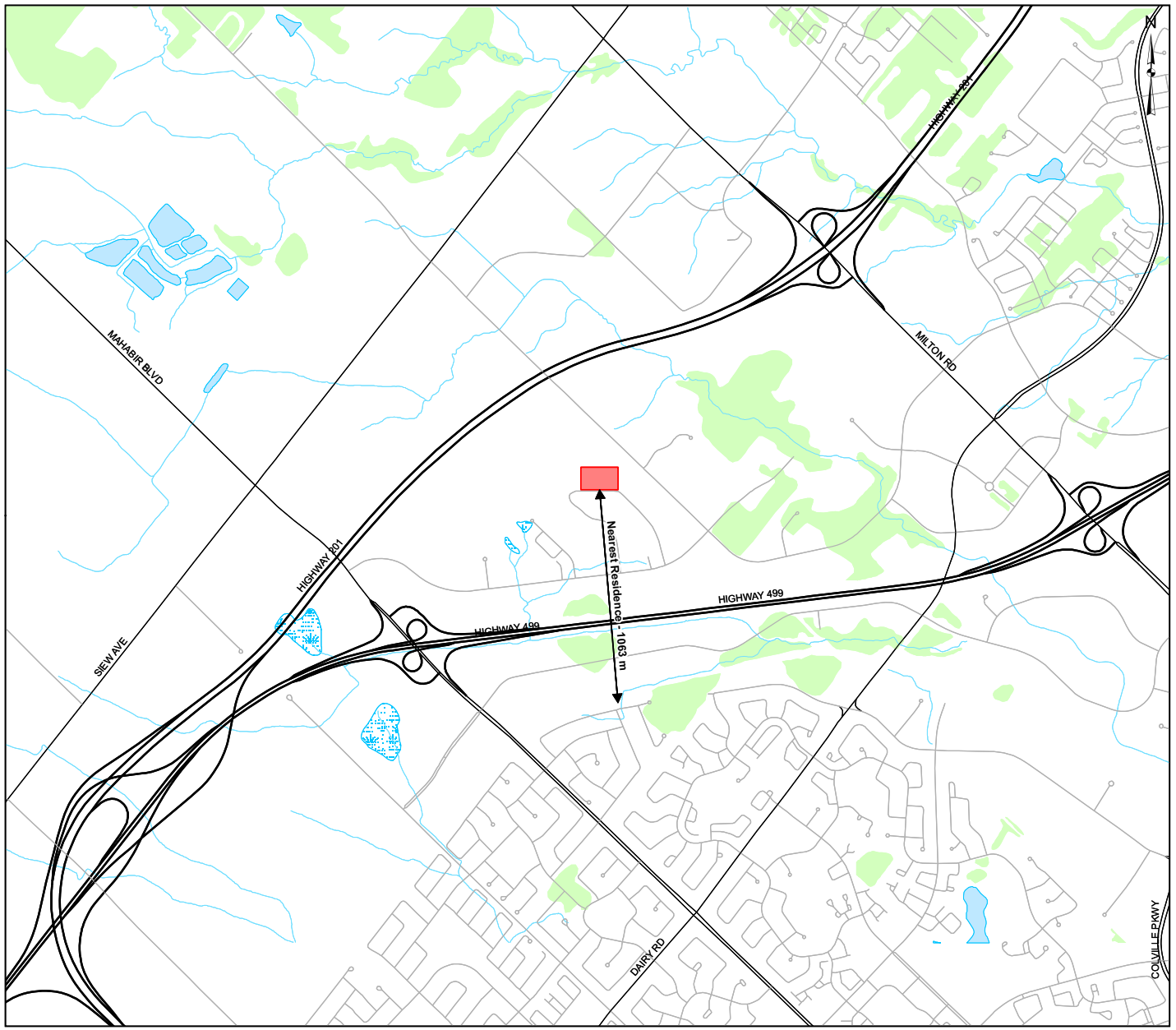
1 refers to Standards in Schedule 1 of O. Reg. 419/05

(G) refers to criteria identified as POI Guideline in the document "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution - Local Air Quality" dated February 2008.

* Approved concentration covered in the CofA Application 1234-ABCDEF, dated October 1, 2004.

** Approved concentration covered in the Maximum Concentration Level Assessment submitted by ACME in April 2007

JSL refers to Jurisdictional Screening Limit the "Jurisdictional Screening Level (JSL) List A Screening Tool for Ontario Regulation 419: Air Pollution – Local Air Quality" dated February 2008.



LEGEND

- Highway
- Major Road
- Local Road
- Watercourse
- Waterbody
- Wetland
- Woodlot
- Property Boundary

REFERENCE

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0 250 500 1,000 1,500

Meters

PROJECT

EMISSION SUMMARY & DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT

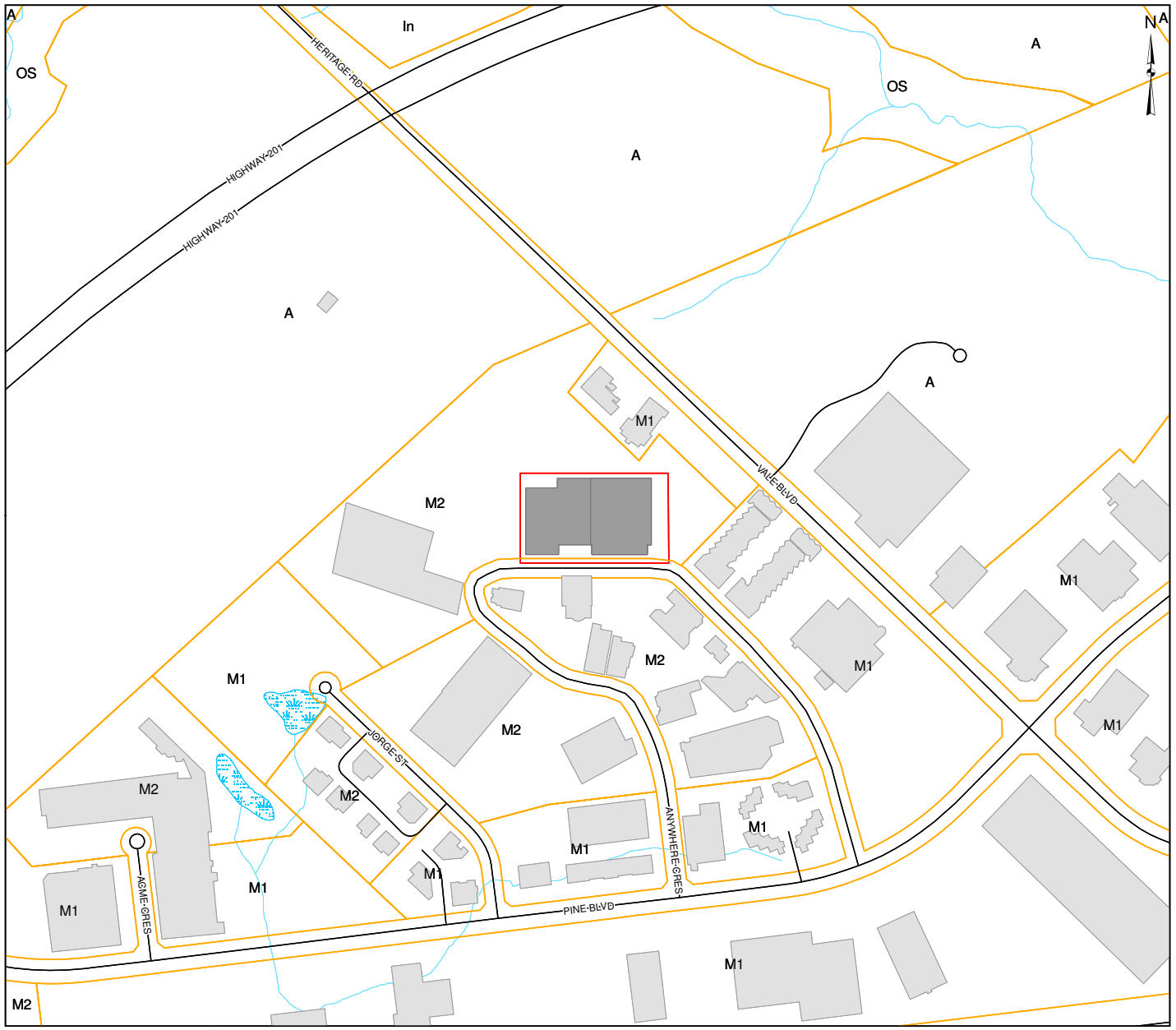
TITLE

SITE LOCATION PLAN

STACKS P.E.S. Inc.

PROJECT NO. 08-5555-050			SCALE 1:20,000	Ver. 1.0
DESIGN	PRM	05 Sep. 2008		
GIS	KD	10 Feb. 2009		
CHECK	JW	10 Feb. 2009		
REVIEW	JC	10 Feb. 2009		

FIGURE: 1



LEGEND

- Road
- Watercourse
- Waterbody
- Wetland
- Building Footprint
- Site Location
- Property Line
- Zoning Boundary

Zoning Description

- A - Agricultural
- In - Interm (Controlled by Bylaws)
- M1 - Industrial (Limited Outside Storage
- M2 - Industrial (Outside Storage)
- OS - Open Space

REFERENCE

Produced by P.E.S. Stacks Inc under licence from
Ontario Ministry of Natural Resources, © Queens Printer 2007
Zoning Data - Obtained from the City of Anywhere, October 2006

0 50 100 200 300 400

Meters

PROJECT

EMISSION SUMMARY & DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT

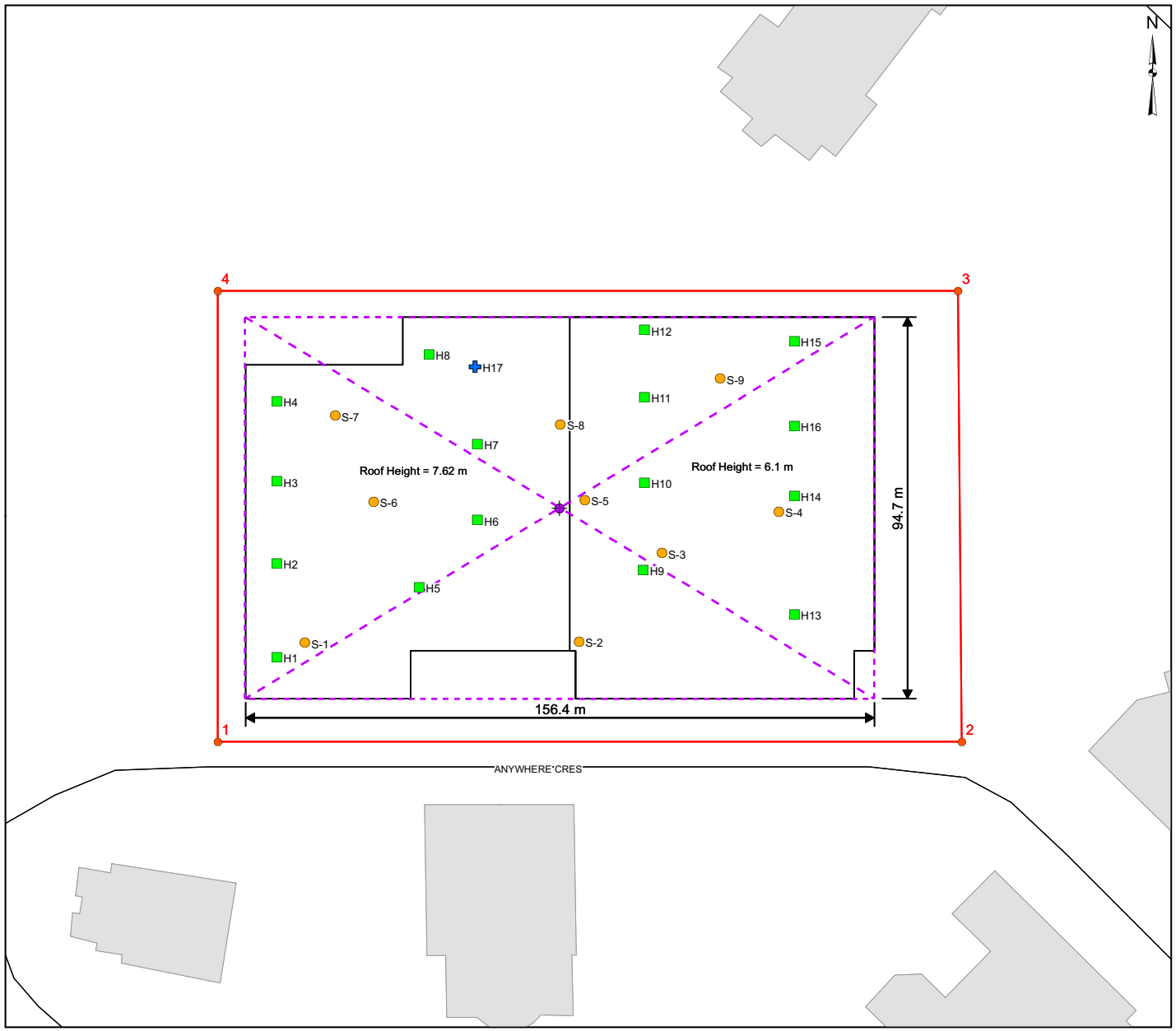
TITLE

LAND USE ZONING DESIGNATION PLAN

STACKS P.E.S. Inc.

PROJECT No. 08-5555-050			SCALE 1:5,000	Ver. 1.0
DESIGN	PRM	05 Sep. 2008		
GIS	PRM	19 Sep. 2008		
CHECK	JW	19 Sep. 2008		
REVIEW	JC	19 Sep. 2008		

FIGURE: 2



LEGEND

- Process Vent / Stack
- HVAC
- Boiler Stack / Point Source
- Virtual Source Centroid
- Road
- Watercourse
- Waterbody
- Wetland
- Building Footprint
- Virtual Source
- Property Boundary
- Site Location

PROPERTY LINE COORDINATES

1 - (0, 0)
2 - (185, 0)
3 - (184, 112)
4 - (0, 112)

VIRTUAL SOURCE CENTROID COORDINATES

(85, 58)

REFERENCE

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0 12.5 25 50 75
Meters

PROJECT
EMISSION SUMMARY & DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT

TITLE
SITE PLAN AND ROOF LAYOUT

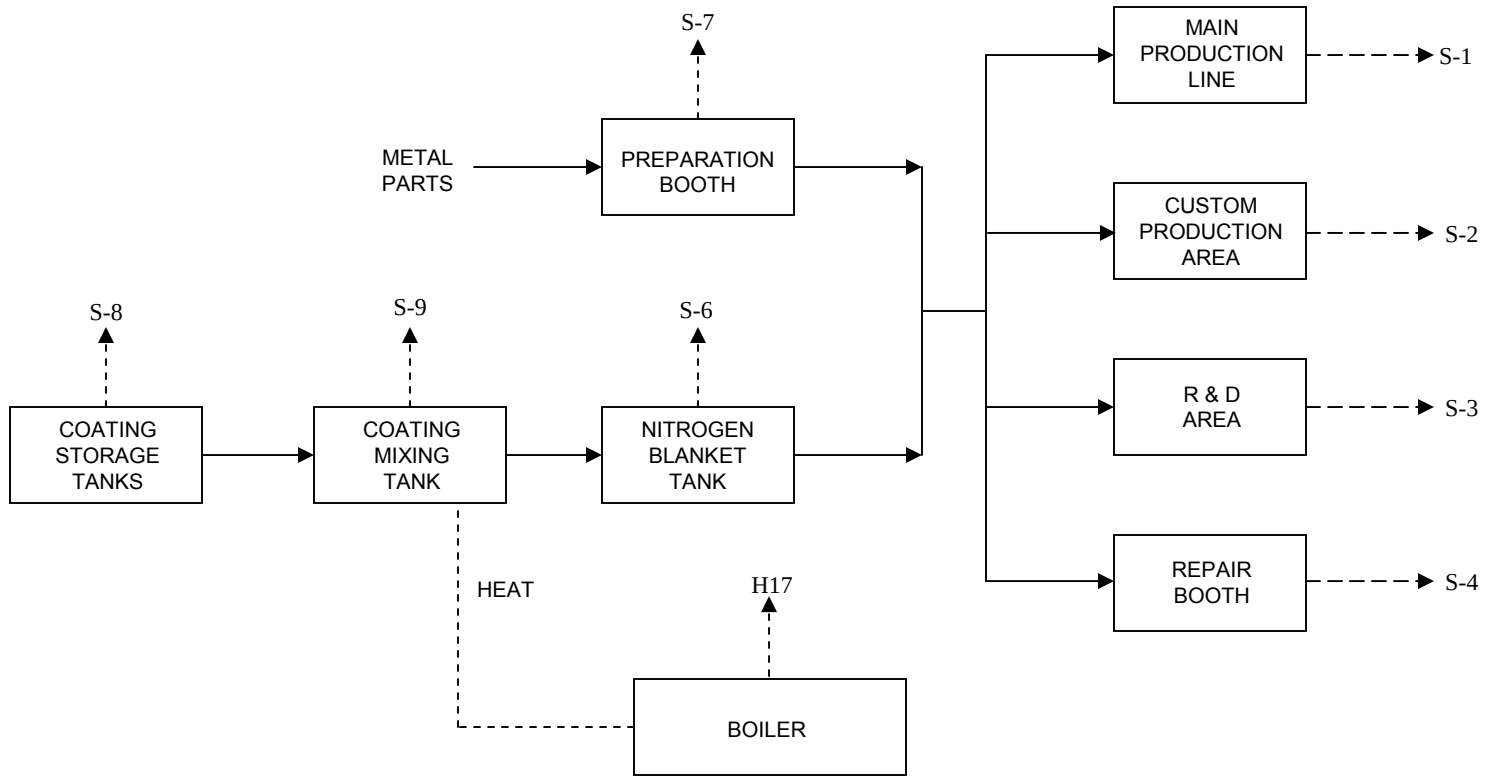
STACKS P.E.S. Inc.

PROJECT NO. 08-5555-050			SCALE 1:1,000	Ver. 1.0
DESIGN	PRM	05 Sep. 2008		
GIS	KD	10 Feb. 2009		
CHECK	JW	10 Feb. 2009		
REVIEW	JC	10 Feb. 2009		

FIGURE: 3

PROCESS FLOW DIAGRAM
EMISSION SUMMARY AND DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT, ONTARIO

FIGURE 4



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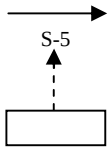


PROCESS FLOW

SOURCE IDENTIFIER

NOTES:

1. This schematic represents the major processes taking place at the Facility. Simple processes such as maintenance, QA/QC procedures, backup operational procedures, and parts-washing have not been represented.

Date: September 19, 2008

Project Number: 08-5555-050

P.E.S. STACKS INC.

N:\Active\2007\1113\07-5555-411 ACME Inc Figure 4.ppt

Supporting Calculations

Appendix A
Acme Anytown Plant, Project 08-5555-050

Supporting Calculations

Sources S1-S2

Methodology: Mass Balance (MB)

The coating used in the process is made of a mixture of a non-volatile resin mixed with a solvent matrix. Emission rates are estimated by multiplying the usage rate on mass per time basis by the percentage by weight in the various coatings and assuming that 100% of the volatile components are emitted to the atmosphere at the same rate as they are applied and that none of the non-volatile components are emitted. A very small amount of a specialty additive are mixed with the coating prior to the dipping process.

The weight percentage in the coatings is documented in a theoretical or maximum case composite coating consisting of all compounds listed on all coating used at the facility MSDS Sheets at the highest percentage quoted. The following table presents the maximum concentrations of the volatile components in the coatings.

Source ID	S1	S2
	Main Production Line	Custom Production Station
Usage Rate [kg/hr of coating]	212.0	21.2

Theoretical Composite Coating

Contaminant	CAS Number	Weight Percentage
Toluene	108-88-3	12.00%
Xylene	1330-20-7	15.00%
Methyl isobutyl ketone	108-10-1	5.00%
Methyl alcohol	67-56-1	20.00%
2-Ethoxyethyl acetate	111-15-9	1.00%
Glycol Ether EE	110-80-5	1.00%
Trichloroethylene	79-01-6	3.50%
Methyl ethyl ketone	78-93-3	25.00%
Isopropyl alcohol	67-63-0	1.00%
Ethanol	64-17-5	1.00%
N-butyl alcohol	71-36-3	1.00%
2 Methylbutyl Alcohol	137-32-6	0.50%
Amyl Alcohol	71-41-0	1.00%
n Propoxypropanol	1569-01-3	1.00%

Sample Calculation: Toluene emissions from S-1

Toluene Emission Rate = Usage Rate [kg/hr] × Weight Percentage [%] × 1000 [g/kg] × 1/3600 [hr/s]
Toluene Emission Rate = 212 kg/hr × 12.00% × 1000 g/kg × 1hr/3600s
Toluene Emission Rate = 7.067 g/s

Data Quality: Above Average

In accordance with section 8.3.2 of the ESDM Procedure Document, the emission rate estimating technique used for all contaminants emitted from this source may be classified as "Above-Average Data Quality", as 100% of the material balanced was accounted for as being emitted to air.

Operating Condition, Individual Maximum Rates of Production

The emission rate calculations for these sources are based on the individual maximum rates of 212.0 kg/hr for S-1 and 21.2 kg/hr for S-2.

Emission Rates

Contaminant	Emission Rates [g/s]	
	S1	S2
Toluene	7.067	0.7067
Xylene	8.833	0.8833
Methyl isobutyl ketone	2.944	0.2944
Methyl alcohol	11.778	1.1778
2-Ethoxyethyl acetate	0.589	0.0589
Glycol Ether EE	0.589	0.0589
Trichloroethylene	2.061	0.2061
Methyl ethyl ketone	2.061	0.2061
Isopropyl alcohol	14.722	1.4722
Ethanol	0.589	0.0589
N-butyl alcohol	0.589	0.0589
2 Methylbutyl Alcohol	0.589	0.0589
Amyl Alcohol	0.294	0.0294
n Propoxypropanol	0.589	0.0589

Source S7

Methodology: Mass Balance (MB)

During the preparation process 1 kg of 100% methylene chloride is used for a 15 minute period, no other materials are used in the preparation area. While the methylene chloride is used only for 15 minutes the entire preparation process takes 30 minutes. It is assumed that all the methylene chloride is volatilized and emitted to the atmosphere. The emission takes place over 15 minutes but since the impact is being assessed against a half-hour POI impact it is permissible to average that emission rate over half an hour. It is assumed that preparations that utilize methylene chloride take place once every hour.

Source ID	S7
	Preparation Area
Usage Rate [kg/30 minutes methylene chloride]	1.00
Preparation Throughput [Preps/hr]	1

Sample Calculation: Methylene Chloride emissions from S-7

Methylene Chloride Emission Rate = Usage Rate [kg/30min] × 1000 [g/kg] × 1/60 [min/s]
Methylene Chloride Emission Rate = 1.00 kg/30min × 1000g/kg × 1min/60s
Methylene Chloride Emission Rate = 0.556 g/s

Data Quality: Above Average

In accordance with section 8.3.2 of the ESDM Procedure Document, the emission rate estimating technique used for all contaminants emitted from this source may be classified as "Above-Average Data Quality", as 100% of the material balanced was accounted for as being emitted to air.

Operating Condition, Individual Maximum Rates of Production

The emission rate calculation for this source is based on a maximum rate of 1 kg per half hour. The preparation process is carried out once every hour for each hour of operation.

Source S10

Methodology: Emission Factor (EF)

USEPA Chapter 1.4, Natural Gas Combustion, External Sources for boilers of less than 100 MMBtu/hr emission factor is 100 pounds of NOx per million standard cubic feet. The USEPA quotes this emission factor as having a quality rating of "B".

List of Combustion Equipment

Equipment Identification	Ratings [Btu/hr]
H1- Heater	800,000
H2- Heater	800,000
H3- Heater	800,000
H4- Heater	800,000
H5- Heater	800,000
H6- Heater	800,000
H7- Heater	800,000
H8- Heater	800,000
H9- Heater	800,000
H10- Heater	800,000
H11- Heater	800,000
H12- Heater	800,000
H13- Heater	800,000
H14- Heater	800,000
H15- Heater	800,000
H16- Hot Water Tank	800,000
TOTAL	**12,800,000**

Sample Calculation: Total nitrogen oxides emissions for total HVAC equipment

Nitrogen Oxides Emission Rate = Total HVAC equipment rating [Btu/hr] × $100/10^6$ [lb/scf] × 1/1020 [scf/Btu] × 1/3600 [hr/s] × 1000/2.205 [g/lb]
Nitrogen Oxides Emission Rate = 12,800,000 Btu/hr × $100lb/10^6$ scf × 1 scf/1020 Btu × 1hr/3600s × 1000g/2.205lb
Nitrogen Oxides Emission Rate = 0.158 g/s

Data Quality: Above Average

In accordance with section 8.3.2 of the ESDM Procedure Document, the emission rate estimating technique used for all contaminants emitted from this source may be classified as "Above-Average Data Quality", as 100% of the material balanced was accounted for as being emitted to air.

Operating Condition, Individual Maximum Rates of Production

The emission rate calculation for this source is based on each piece of combustion equipment operating simultaneously at its maximum firing rate.

Source H17 - Boiler

Methodology: Emission Factor (EF)

USEPA Chapter 1.4, Natural Gas Combustion, External Sources for boilers of less than 100 MMBtu/hr emission factor is 100 pounds of NOx per million standard cubic feet. The USEPA quotes this emission factor as having a quality rating of "B".

List of Combustion Equipment

Equipment Identification	Ratings [Btu/hr]
H17 - Boiler	9,900,000

Sample Calculation: Nitrogen oxides emissions for Boiler

Nitrogen Oxides Emission Rate = Equipment rating [Btu/hr] × $100/10^6$ [lb/scf] × 1/1020 [scf/Btu] × 1/3600 [hr/s] × 1000/2.205 [g/lb]
Nitrogen Oxides Emission Rate = 9,900,000 Btu/hr × $100lb/10^6$ scf × 1 scf/1020 Btu × 1hr/3600s × 1000g/2.205lb
Nitrogen Oxides Emission Rate = 0.122 g/s

Data Quality: Above Average

In accordance with section 8.3.2 of the ESDM Procedure Document, the emission rate estimating technique used for all contaminants emitted from this source may be classified as "Above-Average Data Quality", as 100% of the material balanced was accounted for as being emitted to air.

Operating Condition, Individual Maximum Rates of Production

The emission rate calculation for this source is based on each piece of combustion equipment operating simultaneously at its maximum firing rate.

Supporting Information for Assessment of Negligibility
Acme Inc.

Appendix B
Acme Anytown Plant, Project 08-5555-050

Sources were screened for negligibility using the following screening protocols listed in the ESDM Procedure Document (Section 7).

- Fugitive dust from on-site roadways (Section 7.4.)
- Combustion of natural gas and propane (Section 7.1.1)
- Sources listed on Table B-3 (Section 7.2.1)
- Sources that are insignificant relative to total emissions (Section 7.2.2)
- Generalized guidance to identifying Insignificant or Significant Sources and Contaminants (Section 7.3)
- Identifying significant contaminants using an emission threshold (Section 7.1.2)

The results of the screening are discussed in greater detail in the following text.

Fugitive Road Dust:

The Facility is not listed in Table 7-2 or 7-3 of Section 7.4 of the ESDM Procedure Document and accordingly dust emissions from these sources can be considered as insignificant.

Combustion of Natural Gas and Propane:

As per Section 7.1.1 of the ESDM Procedure Document, contaminants other than NO_X are generally considered negligible from this type of source and only NO_X has been assessed for Source S-10.

Appendix B
Acme Anytown Plant, Project 08-5555-050

Sources Listed on Table B-3:

Table B-3 of the ESDM Procedure Document lists sources that can be considered to be insignificant; the following sources at the Facility are listed on Table B-3.:

Maintenance welding performed at Source S-5 Maintenance Shop is listed on Table B-3. The Facility has one (1) maintenance person that repairs equipment on as-needed basis. Major equipment repairs are sent off-site.

Nitrogen venting from Source S-6 Nitrogen Blanket Tank is listed on Table B-3.

Sources that are Insignificant Relative to Total Emissions:

The ministry has provided additional guidance to the Generalized Guidance in Chapter 7.3 of ESDM Procedure Document through the O. Reg. 419/05 Q&A process regarding Semi Qualitative Correlative Assessments (Q8-7 Round 2 March 10, 2006).

In general using this guidance a source may be considered negligible if the emissions from one source of contaminants are similar (same contaminants and same relative proportions of contaminants) to another source of contaminants ***and*** one of the sources would have much higher emissions rates than the other ***and*** the nature of their emission is similar (resultant dispersion impact from either source are the same) then the smaller source can be classified as insignificant provided the resultant POI impact of all the contaminants does not result in non-compliance ***or*** that the margin of compliance is so slight that if the smaller source or sources were included the aggregate POI impact of all the contaminants would result in non-compliance.

Using this guidance it is possible to conclude that sources of contaminants are negligible by comparing the difference in usage rates between sources at a Facility. If the usage rate of materials in the process are much less than the usage rates in other significant sources at the same facility then the lesser source may be considered negligible.

Appendix B
Acme Anytown Plant, Project 08-5555-050

There are four sources at the Facility which are similar to the main production line sources at the Facility. The sources are similar in that they involve the volatilization of coating. For sources S-3 and S-4 their usage rates at 1 kg/hr and 2.1 kg/hr are much lower than the usage rate of 212 kg/hr for the main production line. For tank sources S-8 and S-9 the low filling rate of 20,000 litres per hour (0.0056 m^3/s) and the expected concentration of volatiles in the headspace resulting from the coating material evaporating would result in an emission rate much lower than the evaporation of all the volatiles in the coating used in the main production booth at 212 kg/hr.

Source Information		Rationale	Support for Rationale
Source ID	**Source Description**		
S-3	R&D Area	Semi-Qualitative Correlative Assessment	This line uses the same type of material as the main production line but at a much lower rate of 1kg/hour compared to 212 kg/hour
S-4	Repair Booth	Semi-Qualitative Correlative Assessment	This line uses the same type of material as the main production line but at a much lower rate of 2.1kg/hour compared to 212 kg/hour
S-8, S-9	Coating Storage Tanks Coating Mixing	Semi-Qualitative Correlative Assessment	Peak emission from tanks will occur during filling. At a maximum filling rate of 0.005 m^3/s even if the substance in the tank was a pure volatile, the density of the vapor in air at room temperature would not be high enough that the resultant emission would be significant compared to the usage rate of 212 kg/hour of the main production line.

Appendix B
Acme Anytown Plant, Project 08-5555-050

Identifying significant contaminants using an emission threshold

Using the Threshold Calculator provided in Chapter 7.1.2 of the ESDM Procedure Document the following Emission Thresholds were calculated:

Isopropyl alcohol (CAS # 67-63-0) from Sources S-1 & S-2

Isopropyl alcohol is emitted from sources S-1 and S-2 only.

Shortest distance from S-1 exhaust stack to the Property-Line (in an area classified as urban) is 20 metres. Shortest distance from S-2 exhaust stack to the Property-Line (in an area classified as urban) is 25 metres.

Section 18 of O.Reg. 419/05 currently applies to the facility and the List of MOE POI Limits contains an MOE guideline limit for isopropyl alcohol of 24,000 µg/m^3 (1/2-hour average).

Maximum 1-hour average Dispersion Factor for 20 metres can be interpolated from, Table B-1 Guidance for Screening-Out with Dispersion Factors of Appendix B of the ESDM Procedure Document. The shortest distance from one of the sources is 20 metres; the Dispersion *Factor from Table B-1* for 20 metres is 8,700 µg/m^3 per g/s.

Section 7.1.2 of the Procedure Document, entitled Identifying Significant Contaminants Using an Emission Threshold indicates that in most cases, contaminants that are emitted from a specific facility may be identified as negligible when they are below emission thresholds that are developed using the following formula:

$$\text{Emission Threshold (g/s)} = \frac{0.5 \times \text{MOE Limit (µg/m}^{3)}}{\textit{Dispersion Factor From Table B-1}\ (\text{µg/m}^3 \text{ per g/s emission})}$$

The averaging period for the Emission Threshold would be dependant upon the combination of the MOE POI Limit and the dispersion factor, as explained in the Procedure Document. In this case, the averaging time is 1/2-hour which requires a conversion of the one-hour averaging time as per section 17 of O. Reg. 419/05 for the *Dispersion Factor from Table B-1.*

The *Dispersion Factor from Table B-1* converted to Maximum 1/2-hour average is

$$8{,}700 \times (1/0.5)^{0.28} = 10{,}563\ \text{µg/m}^3 \text{ per g/s.}$$

Isopropyl alcohol (CAS # 67-63-0) from Sources S-1 & S-2 - continued

The Site-Specific Emission Threshold for Isopropyl alcohol is:

0.5 x (24,000/10,564) = 1.14 g/s or 2.04 kilograms per 1/2- hour period.

The calculated aggregate emission rate for Isopropyl alcohol from Sources S-1 and S-2 is:

(1% x 212 kg/hour + 1% x 21.2 kg/hr) (0.5 hr)/ 1/2hr = 1.17 kg per 1/2-hr

1.17 kg per 1/2-hour period is less than 2.04 kg per 1/2-hour period; therefore, emissions of Isopropyl alcohol from Source S-1 and S-2 are considered negligible using the emission threshold calculations provided in the Procedure Document.

The Threshold Calculator was applied to identify other contaminants as negligible; the results are tabulated in the following Table.

Appendix B
Acme Anytown Plant, Project 08-5555-050

Contaminant Name	Contaminant CAS Number	Source ID	Source Description	MOE Criteria (µg/m³)	Criteria Averaging Time	Distance to Property Line in (m)	Table B-1 Dispersion Factor (µg/m³)	Table B-1 Dispersion Factor Converted To Criteria Averaging Time (µg/m³)	Emission Threshold	Emission Threshold	Aggregate Contaminant Emission Rate	Significant?
Ethanol	64-17-5	S-1	Main Production Line	19,000	1/2 hour	20	8,700	10,563	0.90 g/s	1.62 kg/1/2hr	1.17 kg/1/2hr	No
		S-2	Custom Production Area			25						
Isopropyl alcohol	67-63-0	S-1	Main Production Line	24,000	1/2 hour	20	8,700	10,563	1.14 g/s	2.04 kg/1/2hr	1.17kg/1/2hr	No
		S-2	Custom Production Area			25						
Acetone	67-64-1	S-7	Preparation Booth	48,000	1/2 hour	28	7,740	9398	2.55 g/s	4.60 kg/1/2 hr	1.0 kg/1/2hr	No

Dispersion Modelling Printouts
Acme Inc.

Dispersion Factor

Property line co-ordinates

1=(0. 0.) # 2=(185. 0.) # 3=(184. 112.) # 4=(0. 112.)
5=(0. 0.)

Virtual Sources

Number	Height	Emission Rate	Width	Length	Angle	x	y
	m	gm/s	m	m	deg	m	m
1	7.6	1.00	94.7	156.4	.0	85.	58.

vs

Appendix C
Acme Anytown Plant, Project 08-5555-050

Dispersion Factor

MAXIMUM GROUND LEVEL CONCENTRATION
VERSION 2.00

Data from file: cstudy1.STK

Virtual Sources

Number	Height	Emission Rate	Width	Length	Angle	X	Y
	m	gm/s	m	m	deg	m	m
1	7.6	1.00	94.7	156.4	.0	85.	58.

Single Source Maximum Ground Level Concentrations

Source	Stability	Maximum Conc (ug/m3)	Distance (m)	Wind Speed (m/sec)
1	C	117.92	79.	5.000
	D	208.95	79.	5.000

Maximum off-property ground level concentration		200.68	ug/m3
Stability		D	
Wind direction		179.726	deg
Wind speed		5.000	m/s
Coordinates	-.8	58.4	(m)

Maximum Concentration along the property line		202.08	ug/m3
Stability		D	
Wind direction		179.908	deg
Wind speed		5.000	m/s
Coordinates	0.	58.	(m)

Appendix C
Acme Anytown Plant, Project 08-5555-050

NO_x Emissions

Property line co-ordinates

```
 # 1=(    0.    0.) # 2=(  185.    0.) # 3=(  184.  112.) # 4=(    0.
112.)
 # 5=(    0.    0.)
```

Point Sources

Number	Height	Emission Rate	Exit Velocity	Diameter	Temp	x	y
	m	gm/s	m/s	m	C	m	m
2	15.3	.12	8.0	.5	137.0	64.	93.

Virtual Sources

Number	Height	Emission Rate	Width	Length	Angle	x	y
	m	gm/s	m	m	deg	m	m
1	7.6	.16	94.7	156.4	.0	85.	58.

Appendix C
Acme Anytown Plant, Project 08-5555-050

NO_x Emissions

MAXIMUM GROUND LEVEL CONCENTRATION
VERSION 2.00

Data from file: cstudy2.STK

Point Sources

Number	Height	Emission Rate	Exit Velocity	Diameter	Temp	X	Y
	m	gm/s	m/s	m	C	m	m
2	15.3	.12	8.0	.5	137.0	64.	93.

Virtual Sources

Number	Height	Emission Rate	Width	Length	Angle	X	Y
	m	gm/s	m	m	deg	m	m
1	7.6	.16	94.7	156.4	.0	85.	58.

Single Source Maximum Ground Level Concentrations

Source	Stability	Maximum Conc (ug/m3)	Distance (m)	Wind Speed (m/sec)
1	C	18.868	79.	5.000
	D	33.432	79.	5.000
2	C	12.614	190.	2.235
	D	15.326	330.	2.235

All Stacks Tested

Maximum off-property ground level concentration	25.170		ug/m3
Stability		D	
Wind direction		272.779	deg
Wind speed		2.235	m/s
Coordinates	77.0	-178.3	(m)

Maximum Concentration along the property line	32.333		ug/m3
Stability		D	
Wind direction		179.908	deg
Wind speed		5.000	m/s
Coordinates	0.	58.	(m)

Facility Material Safety Data Sheets

(Complete MSDS package provided in attached CD)

MATERIAL SAFETY DATA SHEET

Goocoat One

FILE NO.: 153668
MSDS DATE: 9/02/07

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Goocoat One**
SYNONYMS:
PRODUCT CODES:

MANUFACTURER:
DIVISION:
ADDRESS:

EMERGENCY PHONE: **(149) 555-1234**
CHEMTREC PHONE: **(149) 555-5678**
OTHER CALLS:
FAX PHONE: **(149) 555-1235**

CHEMICAL NAME:
CHEMICAL FAMILY:
CHEMICAL FORMULA:

PRODUCT USE:
PREPARED BY:

SECTION 1 NOTES:

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Number	Weight	ACGIH		OSHA	
Toluene	108-88-3	8.0%	100	ppm	100	ppm
Xylene	1330-20-7	10.0%	100	ppm	100	ppm
Methyl isobutyl ketone	108-10-1	3.0%				
Methyl alcohol	67-56-1	10.0%				
2-Ethoxyethyl acetate	111-15-9	1.0%				
Trichloroethylene	79-01-6	2.0%				
Glycol Ether EE	110-80-5	1.0%				
Methyl ethyl ketone	78-93-3	20.0%	200	ppm	200	ppm
Isopropyl alcohol	67-63-0	1.0%				
Ethanol	64-17-5	1.0%				
N-butyl alcohol	71-36-3	1.0%				
2 Methylbutyl Alcohol	137-32-6	0.5%				
n Propoxypropanol	1569-01-3	1.0%				

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

The facility produces coated plastic parts. There are two production areas at the Facility: the main production booth and a smaller custom production area..

Hazardous Ingredients

Toluene	108-88-3	12.0%
Xylene	1330-20-7	15.0%
Methyl Isobutyl ketone	108-10-1	5.0%
Methyl alcohol	67-56-1	20.0%

STATE REGULATIONS:

The maximum emission rates for each significant contaminant emitted from the significant sources were calculated in accordance with requirements of the Procedure.

INTERNATIONAL REGULATIONS:

For each contaminant the emission rate was estimated, the methodology for the calculation is documented

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

The expected contaminants emitted from each source are also identified in Table 2 - Sources and Contaminants Identification Table; for example the expected contaminants emitted from the Main Production Line are identified as Volatile Organic Compounds. Each of the identified sources has been assigned a source reference number, for example the Main Production line has been designated S-1.

PREPARATION INFORMATION:

A POI concentration for each significant contaminant emitted from the Facility was calculated based on the calculated emission rates and the output from the approved dispersion model; t he results are presented in the following

DISCLAIMER:

The operating condition under which the maximum POI concentration would occur for the Facility when calculating the maximum point of impingement concentration using the model in the appendix to Regulation 346 is the scenario where all significant sources are operating simultaneously at their individual maximum rates of production.

ATTACHMENT 4

NOISE SCREENING PROCESS FOR S.9 APPLICATIONS, SUPPLEMENT TO APPLICATION FOR APPROVAL AND SUPPORTING INFORMATION INCLUDING:

SITE LOCATION PLAN
LAND USE ZONING DESIGNATION PLAN

Ontario

NOISE SCREENING PROCESS FOR S.9 APPLICATIONS SUPPLEMENT TO APPLICATION FOR APPROVAL

In order to obtain an approval under Section 9 of the EPA, applicants are, as a minimum, required to assess and document the impacts of all noise emissions from their facility on any noise sensitive locations defined as a Point of Reception. In order to facilitate this assessment, the ministry has developed a Noise Screening Process.

The Noise Screening Process has been developed for mining, utilities and manufacturing operations that are being reviewed by the Air and Noise Unit of the Environmental Assessment and Approvals Branch. *Other facilities that require Section 9 approval can not use this Noise Screening Process. Applications for equipment identified as candidates for the Streamline Review Unit (SRU) should not complete this process, rather they should follow specific directions from the SRU. For more information about the types of applications that may be reviewed by the SRU, please refer to the Guide to Applying for Approval (Air & Noise) dated February, 2005.*

The Noise Screening Process consists of the following Steps:

Step 1:	Identify the closest Point of Reception to the facility. (Zoning Plan)
Step 2:	Determine the actual separation distance from the Point of Reception to the facility. (Scaled Area Location Plan)
Step 3:	Calculate the minimum required separation distance by completing the questionnaire on using the facility's North American Industrial Classification System Code and generic assumptions regarding the actual noise sources present at the facility.
Step 4:	Compare the actual separation distance determined in Step 2 with the minimum required separation distance calculated in Step 3 and sign the form.

The Noise Screening Process is based on the fact that the noise emissions from any noise sources at a facility will not exceed ministry noise guidelines at the closest Point of Reception provided there is a sufficient separation distance between the facility's noise sources and the Point of Reception. Using conservative assumptions regarding the likely noise sources present at a facility, a procedure was developed for calculating the minimum required separation distance to achieve compliance with the ministry noise guidelines. If the actual separation distance from the facility to the closest Point of Reception is greater than the calculated minimum required separation distance, then no further action is required. The signed Noise Screening Process form would provide sufficient supporting information for the noise assessment required by the application process.

If the closest Point of Reception is closer than the minimum required separation distance calculated in Step 3 then further assessment is required. The application may still be approved as proposed and noise control measures may not be necessary; however, a more detailed noise impact assessment using site specific information on the noise sources present at the facility must be completed. The Zoning Plan and Scaled Area Location Plan required by the Noise Screening Process will form part of the required assessment outlined in the ministry publication NPC 233 "Information to be Submitted for Approval of Stationary Sources of Sound." See the Guide to Applying for Approval (Air and Noise) dated February, 2005 for more information on the minimum required supporting information to be included with an application that is unable to pass the Noise Screening Process.

1. Applicant Information

Company Name	Site Name	North American Industry Classification System (NAICS) Code
Acme Inc.	Acme Anytown Plant	336410

Site Address - Street information *(applies to an address that has civic numbering and street information - includes street number, name, type and direction)*	Unit Identifier *(identifies type of unit, such as suite & number)*
123 Anywhere Street	

Survey Address *(used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)*

Non Address Information *(includes any additional information to clarify clients' physical location)*

Municipality/Unorganized Township	County/District	Postal Code
Anytown	Ontario	A1B 2C3

2. Noise Screening Process *(please refer to the attached Noise Screening Process – Information & Instructions)*

Step 1

Identify Closest Point of Reception (POR) (attach Land Use Zoning Designation Plan)

POR Description Residential Dwelling POR Acoustical Class (as per NPC-205 & NPC-232) ☒ 1 ☐ 2 ☐ 3

Step 2

Determine Actual Separation Distance (attach Scaled Area Location Plan) 1,063 m

Step 3

Calculate Minimum Separation Distance (complete attached Noise Screening Process Questionnaire) 300 m

Step 4

By signing this statement you are verifying that:

- I am the applicant or have been retained by the applicant, for the purposes of completing this Noise Screening Process;
- The closest Point of Reception has been identified and the Land Use Zoning Designation Plan provided by the Local Municipality is attached (Step 1);
- A Scaled Area Location Plan, prepared by myself, that identifies the facility, the closest Point of Reception and the actual minimum separation distance is attached (Step 2);
- I have accurately completed the Noise Screening Process questionnaire and identified all noise sources as required (Step 3);
- The actual separation distance from the facility to the closest Point of Reception, as determined in Steps 1 and 2, is greater than the minimum required separation distance determined in Step 3; and
- The facility belongs to one of the sectors for which the ministry has indicated the Noise Screening Process is applicable.

Name of Signing Authority (p*lease print)*	Title:	Company: *(if different from the Applicant)*
Virginia Trust-Worthy	General Manager	

Civic Address - Street information *(includes street number, name, type and direction)* ☒ Same as Site Address	Unit Identifier *(identifies type of unit, such as suite & number)*

Municipality	Postal Station	Province/State	Country	Postal Code

Telephone Number *(including area code & extension)*	Fax Number *(including area code)*	E-mail Address
(905) 555-1985	*(905) 555-1967*	VTrust@acmeinc.com

Signature	Date *(y/m/d)*
Virginia Trust-Worthy	September 19, 2008

Noise Screening Process Questionnaire

Question 1

1 (a) - Is your facility NAICS Code Listed on Table 1.1 below?

Table 1.1 Industry with significant noise sources

NAICS Code	Industry	Check all That Apply
21	Mining and Oil and Gas Extraction	☐
22111	Electrical Power Generation	☐
324	Petroleum and Coal Products Manufacturing	☐
3251	Basic Chemical Manufacturing	☐
32731	Cement Manufacturing	☐
32741	Lime Manufacturing	☐
3311	Iron and Steel Mills and Ferro-Alloy Manufacturing	☐
3313	Alumina and Aluminium Production and Processing	☐

1 (b) - Is any of the following equipment Listed on Table 1.2 below present at the facility?

Table 1.2 Equipment with significant noise emissions

Equipment	Check all That Apply
Flares	☐
Gas Turbines, Cogeneration Facilities or any other continuous or peak shaving electrical power generation equipment	☐
Arc Furnaces	☐
Asphalt Plants	☐
High velocity or pressure atmospheric vents such as Gas Process Blow Down Devices	☐
Rock, Concrete or Aggregate Crushing Operations	☐
Individual Fans with flow rates in excess of 47 m^3/s	☐
Individual Pressure Blowers or Positive Displacement Blowers with static pressures in excess of 1.25 kilopascal	☐

Did you answer "Yes" to Question 1(a) or 1 (b)? ☐ Yes ☒ No

If Yes, the minimum required separation distance is 1,000 m.
You have completed Step 3 of the Noise Screening Process, proceed to Step 4.

If No, proceed to Question 2

Proceed to Question 2

Question 2

2 - Is your facility NAICS Code Listed on Table 2 below?

Table 2 Industries with a 500 m Radius		
NAICS Code	**Industry**	**Check all That Apply**
22112	Electrical Power Transmission, Control and Distribution	☐
2213	Water Sewage and Other Systems	☐
321	Wood Product Manufacturing	☐
322	Paper Manufacturing	☐
325	Chemical Manufacturing (except 3251 as noted in Table 1.1 above)	☐
326	Plastics and Rubber Products Manufacturing	☐
327	Non-Metallic Mineral Product Manufacturing (except 32731 and 32741 as noted in Table 1.1 above)	☐
331	Primary Metal Manufacturing (except 3311 as noted in Table 1.1 above)	☐
332	Fabricated Metal Product Manufacturing (except 33271 and 3328)	☐
333	Machinery Manufacturing	☐
335	Electrical Equipment, Appliance and Component Manufacturing	☐
336	Transportation Equipment Manufacturing	☒

Did you answer "Yes" to Question 2? ☒ Yes ☐ No

If Yes, the minimum required separation distance is as follows:

	Minimum Separation	**Check the One That Applies**
For Class 1:		
Daytime Operation Only (between 7:00 am and 7:00 pm)	300 m	☒
Daytime and Afternoon shift only (between 7:00 am and 11:00 pm)	400 m	☐
Other times (outside the hours of 7:00 am to 11:00 pm)	500 m	☐
For Class 2:		
Daytime Operation Only (between 7:00 am and 7:00 pm)	300 m	☐ N/A
Multi shifts (outside the hours of 7:00 am to 7:00 pm)	500 m	☐ N/A
For Class 3:		
Any Operation	500 m	☐ N/A

You have completed Step 3 of the Noise Screening Process, proceed to Step 4

If No, proceed to Question 3

Question 3

3 - Provide information on the facility and any noise sources that may be present by answering the following questions to determine a Score for noise sources located at the facility:

			Check one for each question	Value	Score
(a)	What is the area of the enclosed buildings of the facility?				
	< 650 m^2	< 7,000 ft^2	☐	20	
	650 m^2 to < 2,300 m^2	7,000 ft^2 to < 25,000 ft^2	☐	25	
	2,300 m^2 to 9,300 m^2	25,000 ft^2 to 100,000 ft^2	☐	30	
	> 9,300 m^2	> 100,000 ft^2	☐	40	
	multi building		☐	40	
(b)	Are any cooling towers located at the facility?				
	Yes				
	- Total of all cooling towers less than 20 horsepower	< 15 kW	☐	10	
	- Total of all cooling towers from 20 to 100 horsepower	15 to 75 kW	☐	20	
	- Total of all cooling towers greater than 100 horsepower	> 75 kW	☐	40	
	No		☐	0	
(c)	Are any outdoor air cooled chillers located at the facility?				
	Yes				
	- Total of all chillers less than 150 ton	< 530 kW	☐	10	
	- Total of all chillers from 150 to 1,000 ton	530 to 3,500 kW	☐	20	
	- Total of all chillers greater than 1,000 ton	> 3,500 kW	☐	40	
	No		☐	0	
(d)	Are any air compressors used to provide process air or for pneumatic conveying systems located at the facility?				
	Yes				
	- Total of all compressors less than 10 horsepower	< 7.5 kW	☐	10	
	- Total of all compressors from 10 to 75 horsepower	7.5 to 56 kW	☐	20	
	- Total of all compressors greater than 75 horsepower	> 56 kW	☐	40	
	No		☐	0	
(e)	Is a boiler located at the facility?				
	Yes				
	- Total heat input of all boilers less than 10 million BTU/hr	< 2,930 kW	☐	10	
	- Total heat input of all boilers from 10 to 67 million BTU/hr	2,930 to 19,600 kW	☐	20	
	- Total heat input of all boilers greater than 67 million BTU/hr	> 19,600 kW	☐	40	
	No		☐	0	
(f)	What is the total volumetric flow rate of all process exhaust and general ventilation fans?				
	< 5 m^3/s		☐	0	
	5 m^3/s to < 10 m^3/s		☐	10	
	10 m^3/s to < 15m^3/s		☐	20	
	15 m^3/s to < 20 m^3/s		☐	30	
	> 20 m^3/s		☐	40	
(g)	Are any of the above air compressors, fan or blower motors located outside the building envelope?				
	Yes		☐	10	
	No		☐	0	
			SUBTOTAL - *Add Score from (a) to (g)*		

Question 3 (continued)

Adjustments for Hours of Operation		Check one	Value	Score
Class 1	Daytime Operation Only (between 7:00 am and 7:00 pm) *	☐	-20	
	Daytime and Afternoon shift only (between 7:00 am and 11:00 pm) **	☐	-15	
	Other times (outside the hours of 7:00 am to 11:00 pm)	☐	-10	
Class2	Daytime Operation Only (between 7:00 am and 7:00 pm)*	N/A	-20	
	Multi shifts (outside the hours of 7:00 am to 7:00 pm)	N/A	-10	
Class 3	Daytime Operation Only (between 7:00 am and 7:00 pm)	N/A	-10	
	Multi shifts (outside the hours of 7:00 am to 7:00 pm)	N/A	0	
			TOTAL ADJUSTMENT (A)	

Adjustments for Elevated Background Noise at Point of Reception (POR)***		Check one	Value	Score
Class 1	POR within 100 m of a 400 Series Freeway (e.g. 401)	☐	-10	
	POR within 30 m of a Provincial Highway or Arterial Road (eg HWY 27, Keele St)	☐	-10	
	POR at other locations	☐	0	
Class2	POR within 100 m of a 400 Series Freeway (e.g. 401)	N/A	-10	
	POR within 30 m of a Provincial Highway or Arterial Road (eg HWY 27, Keele St)	N/A	-10	
	POR at other locations	N/A	0	
Class 3	All locations	N/A	0	
			TOTAL ADJUSTMENT (B)	
			TOTAL SCORE - *SUBTOTAL + TOTAL ADJUSTMENT (A) + TOTAL ADJUSTMENT (B)*	

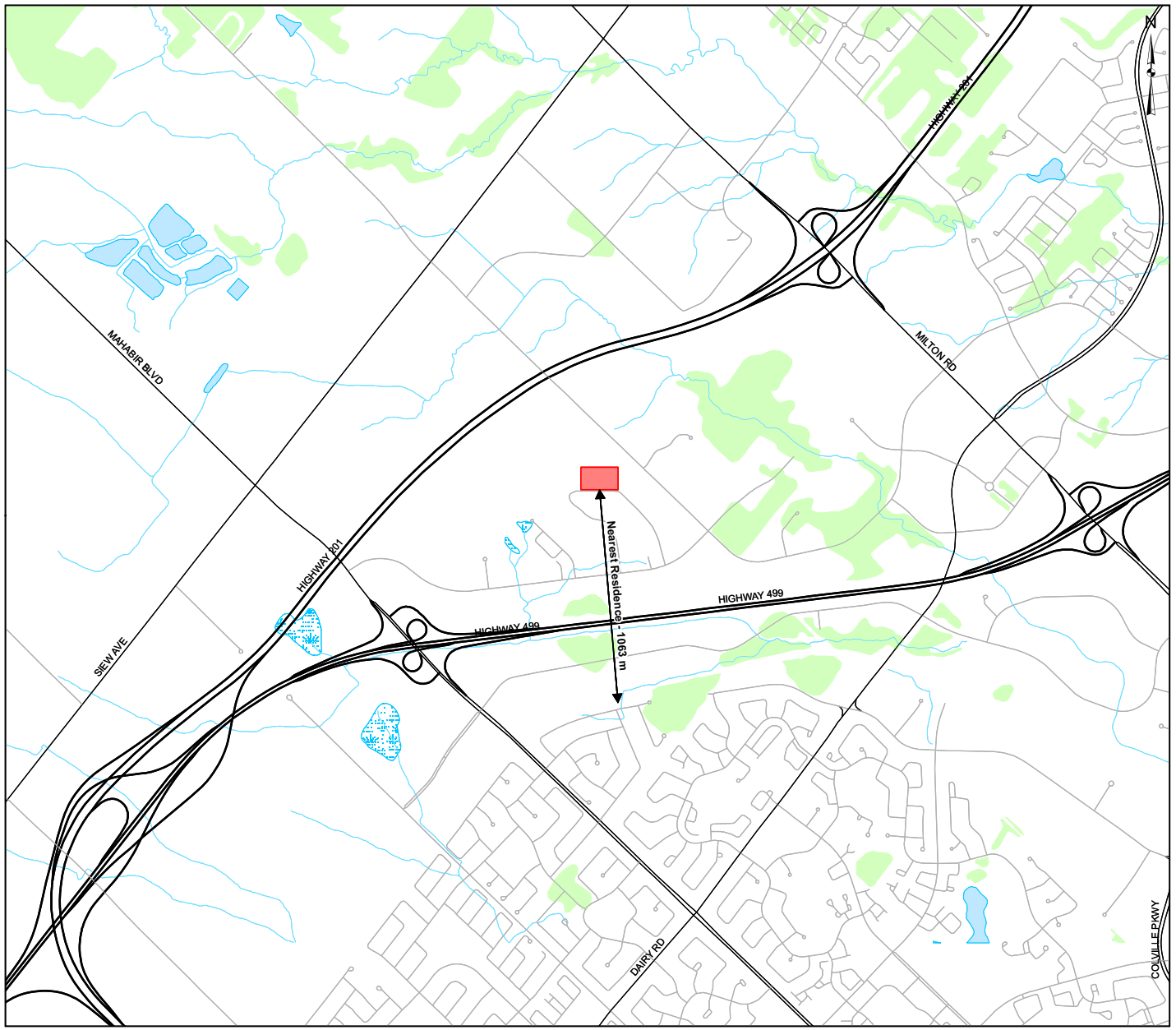
* Note: the largest minimum separation distance for Daytime Operation only in Class 1 or 2 is 300 m.

** Note: the largest minimum separation distance for Evening and Daytime Operation only in Class 1 is 400 m

*** Note: if Adjustments for Elevated Background Noise are used then the applicant must identify the next closest receptor outside the area of influence of the roadway and show that the actual separation distance to the next closest receptor is greater than the minimum required separation distance without adjustments.

Minimum Separation Distances – Based on Total Score (above)

Total Score	Minimum Separation Distance	Check the distance that applies
< 0 points	50 m	☐
< 5 points	75 m	☐
< 10 points	100 m	☐
< 20 points	200 m	☐
< 30 points	300 m	☐
< 40 points	400 m	☐
40 or more points	500 m	☐
	Distance:	m



LEGEND

- Highway
- Major Road
- Local Road
- Watercourse
- Waterbody
- Wetland
- Woodlot
- Property Boundary

REFERENCE

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Ontario Ministry of Natural Resources, © Queens Printer 2007

0 250 500 1,000 1,500

Meters

PROJECT

EMISSION SUMMARY & DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT

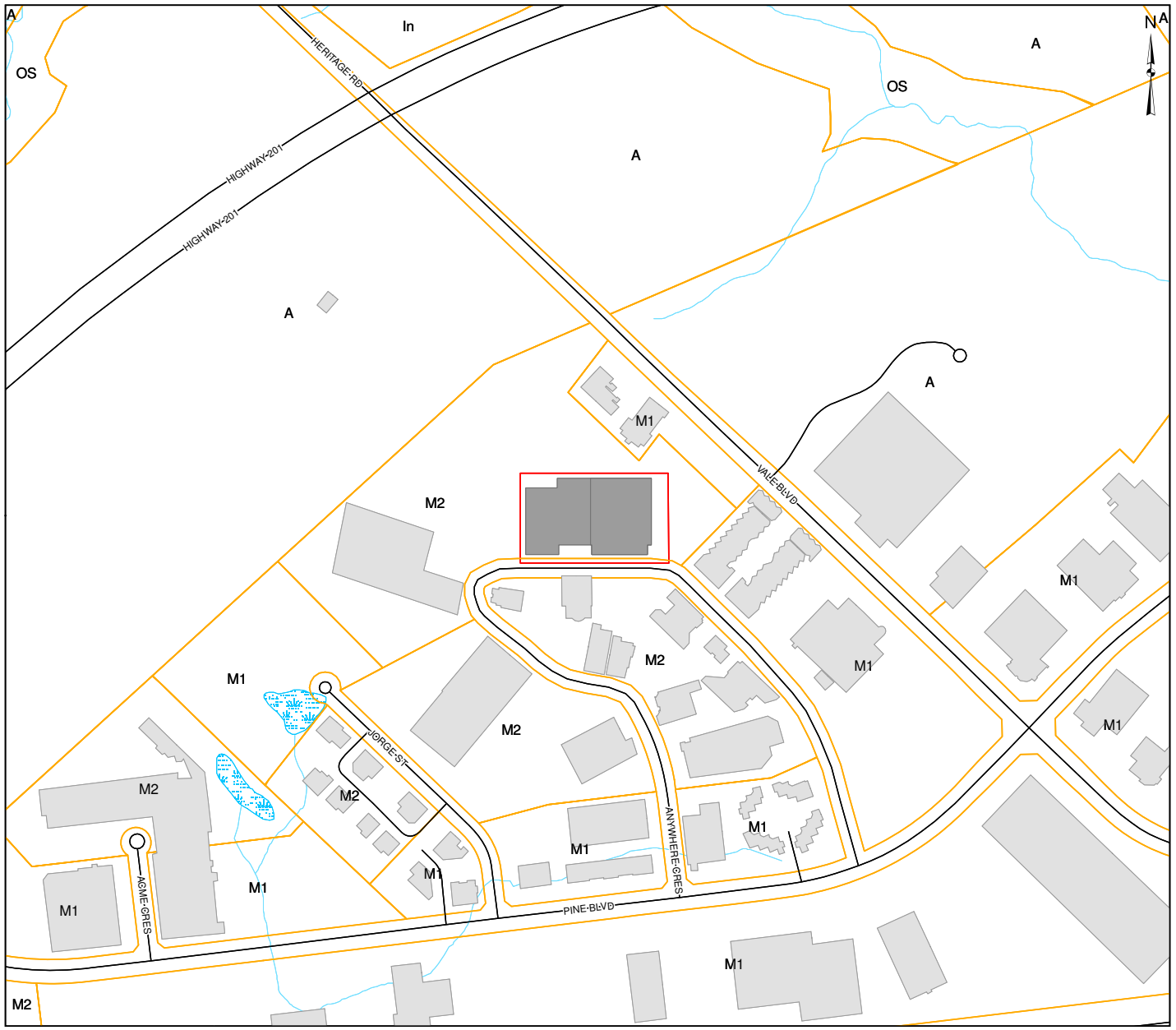
TITLE

SITE LOCATION PLAN

STACKS P.E.S. Inc.

PROJECT NO. 08-5555-050			SCALE 1:20,000	Ver. 1.0
DESIGN	PRM	05 Sep. 2008		
GIS	KD	10 Feb. 2009		
CHECK	JW	10 Feb. 2009		
REVIEW	JC	10 Feb. 2009		

FIGURE: 1



LEGEND

- Road
- Watercourse
- Waterbody
- Wetland
- Building Footprint
- Site Location
- Property Line
- Zoning Boundary

Zoning Description

- A - Agricultural
- In - Interm (Controlled by Bylaws)
- M1 - Industrial (Limited Outside Storage
- M2 - Industrial (Outside Storage)
- OS - Open Space

REFERENCE

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Ontario Ministry of Natural Resources, © Queens Printer 2007
Zoning Data - Obtained from the City of Anywhere, October 2006

0 50 100 200 300 400

Meters

PROJECT

EMISSION SUMMARY & DISPERSION MODELLING REPORT
ACME INC., ACME ANYTOWN PLANT

TITLE

LAND USE ZONING DESIGNATION PLAN

STACKS P.E.S. Inc.

PROJECT No. 08-5555-050			SCALE 1:5,000	Ver. 1.0
DESIGN	PRM	05 Sep. 2008		
GIS	PRM	19 Sep. 2008		
CHECK	JW	19 Sep. 2008		
REVIEW	JC	19 Sep. 2008		

FIGURE: 2